DISCUSSION

Patient does not improve or status worsens:

Reassessment of patients' clinical status may occasionally show that symptoms and/or functional status is failing to improve or is deteriorating in a sustained way. It is important to determine that this static or deteriorated state is not simply the result of a major life crisis unrelated to the therapy being administered.

The clinician must next determine if a patient's unimproved clinical status reflects a temporary exacerbation of symptoms expected to occur in the course of treatment that will ultimately prove to be effective. For example, it is common for patients undergoing exposure therapy to experience some brief distress or symptom exacerbation during initial phases of treatment where they focus on emotions associated with traumatic memories. In this case, it is important to reassure the patient about the natural course of recovery through treatment, assist him/her in coping with symptoms, and enlist his/her in the decision to continue with the current method of treatment. Increasing session contacts and or increasing the dose of medications may provide support needed to alter the outcome of treatment.

If the clinician and patient agree that the current treatment regimen is ineffective, then a collaborative decision can be made to switch to a different modality. Some patients find exposure therapy too distressing and may need to postpone that type of intervention, in favor of using an approach that is more easily tolerated (e.g., cognitive therapy and symptom management approaches).

Another approach is to hold the course of a current therapy, which may appear ineffective, but apply adjunctive treatments (see PTSD Interventions) There is no empirical evidence that supports the effectiveness of combination treatments for PTSD. However, there is clinical consensus that some treatments can act synergistically (e.g., combining coping skills and symptom management approaches with exposure-based treatments).

Clinicians should consider changing the treatment plan by increasing the level of care offered to patients. Levels of care for PTSD vary in intensity, including infrequent visits administered in outpatient clinics, partial hospital programs, specialized inpatient PTSD programs, PTSD residential care programs and domiciliaries, and acute inpatient hospitalization. Patients who fail to progress in outpatient treatment may benefit from a temporary transition to a higher level of care, followed by return to outpatient management after greater stabilization of symptoms have been achieved.

Often, progress in PTSD treatment may by compromised by a concurrent behavioral disorder (e.g., domestic violence), life crisis (e.g., homelessness), or uncontrolled substance use disorder. Referral to ancillary clinical services should be considered for patients for whom these problems emerge during the course of treatment, as identified upon reassessment.

Patient demonstrates improved symptoms and functioning but requires maintenance treatment:

Treatment may also lead to slight or moderate improvement that nonetheless leaves the patient with significant distress and impairment in functioning. If patient demonstrates partial (insufficient) remission, consider one of the following treatment modification options:

- continue the present treatment approach to allow sufficient time for full response. This option might be worth considering when a treatment involves acquisition of skills (e.g., cognitive restructuring or anxiety management). In such a case, it is possible that the patient may be in the process of learning the skill, with the full impact of therapy dependent on increased practice and skill mastery. Or, treatment may not have yet yielded its maximum potential effect because of limited patient compliance; steps taken to increase adherence to treatment prescriptions may accelerate responsivity to the intervention.

- , if the moderate level of improvement obtained is less than would be expected, given what is known about the patient and the treatment modality, a change to a different treatment approach may be indicated.
- In certain circumstances, a move to an increased level of care may be warranted. For example, if current functioning remains poor despite some symptom improvement or the patient stands to experience major consequences for failure to improve more rapidly (e.g., marital separation), it may be desirable to move from outpatient care to a higher level of care (e.g., residential care).
- , improvement in PTSD symptoms may be inhibited by the presence of untreated additional problems, such as substance abuse or exposure to domestic violence. In such situations, it is important to initiate services for these problems in order to improve the capacity of the PTSD treatment to effect change.

When symptoms and other trauma-related problems show significant improvement, the options include the following:

- Discontinue treatment
- Continue the course of treatment as is
- "Step down" to a treatment requiring less intensive resources.

Clinician judgment, based on discussion with the patient, will be the basis of such a decision.

- When therapy has resulted in clinically significant improvement, but the improvement in functioning is recent and of limited duration, a continuation of existing type and intensity of treatment may be indicated if the clinician judges that time is required for the patient to continue practicing new skills or to otherwise consolidate treatment gains. This will be especially true if the clinician judges that a reduction in level of therapeutic support would threaten treatment gains.
- If treatment has produced clear benefit, but the patient is continuing to show treatment gains week-by-week, it may also be helpful to maintain the treatment as is, in hopes of continued improvement. For many patients, some level of continuing care may be indicated after more intensive help has produced improvements. A step-down to less resource-intensive help can often be accomplished by changing treatment type (e.g., from individual psychotherapy to periodic group support), reducing frequency of contact (e.g., from once-per-week to twice-per-month contact), or reducing treatment dose (e.g., medication).
- If treatment has resulted in significant reductions in PTSD, but related problems (e.g., anger, social isolation, guilt) have shown little change, it will be important to consider adding treatment components to address those problems or referring the patient for additional services.

Patient demonstrates remission from symptoms:

When the patient demonstrates remission from symptoms and there are no indications for further therapy, it is time to discontinue treatment. Discontinuation of treatment may be anxiety-provoking for some patients, who have come to depend on the therapist. If this is the case, it may be helpful to discontinue treatment by using the step-down approach noted above, and gradually moving toward termination. Whether treatment is ended gradually, or more quickly, it is important to educate the patient about expected levels of continuing symptoms, indicators of relapse or need for future care, and ways of accessing care should the need arise. The patient can be encouraged to talk with his or her primary care provider about the treatment experience and enlist help in monitoring improvement.

I. Referral

OBJECTIVE

Treat symptoms, support function, and alleviate suffering in those patients with PTSD who are unwilling, unable, or unsuitable for treatment in a mental health setting.

RECOMMENDATIONS

1. Evaluate psychosocial function and refer for psychosocial services, as indicated. Available resources include, but are not limited to: chaplains, pastors, Family Support Centers, Exceptional Family Member Programs, VA benefit counselors, occupational or recreational therapists, Vet Centers, and peer-support groups.
2. Provide case management, as indicated, to address high utilization of medical resources.
3. Consider psychotherapeutic interventions as appropriate for level of training and available resources.
4. For patient with severe symptoms or coexisting psychiatric problems consider referrals to:
   - Specialized PTSD programs
   - Specialized programs for coexisting problems and conditions
   - Partial psychiatric hospitalization or "day treatment" programs
   - Inpatient psychiatric hospitalization

DISCUSSION

Patients with persistent mental health symptoms and needs may benefit from a range of assistance strategies provided by a range of disciplines. In addition to the usual general health and mental health specialists, available resources include, but are not limited to, case-management, chaplains, pastors, Family Support Centers, Exceptional Family Member Programs, VA Benefits Counselors, vocational counselors, occupational or recreational therapy, Vet Centers, and peer-support groups.

In the primary care setting, appropriate encouragement of patients to obtain a mental health referral is important, even if patients are initially hesitant or reluctant to seek it. Mental health referral options include outpatient psychology, social work, or psychiatry clinics, depending on local resources and policies.

In the specialty mental health settings, patients may be referred to specialized PTSD programs or programs that focus treatment on important coexisting problems, such as substance use disorder programs or programs for domestic violence or sexual assault/abuse. Depending on the level of associated disability, complexity of medication regimen, and level of threat to self or others, patients with persistent PTSD symptoms and needs may require inpatient or partial psychiatric hospitalization.

Providers referring from either the primary or specialty mental health setting should consider the need for case-management to ensure that the range of patient needs is addressed and that follow-up contact is maintained.

EVIDENCE

	Recommendations	Sources	QE	Overall Quality	R
1	Consultation/referral to a mental health/PTSD specialist.	Working Group Consensus	III	Poor	I
2	Continued involvement of the primary care provider	Working Group Consensus	III	Poor	I
3	Multidisciplinary team approach	Working Group Consensus	III	Poor	I

VA/DoD CLINICAL PRACTICE GUIDELINE FOR THE MANAGEMENT OF POST-TRAUMATIC STRESS

EVIDENCE-BASED INTERVENTION FOR TREATMENT OF PTSD

INTERVENTIONS

TABLE OF CONTENTS

PHARMACOTHERAPY INTERVENTIONS

A. ACUTE STRESS DISORDER (ASD) PHARMACOTHERAPY

Table 1: Summary Table

R	Significant Benefit	Some Benefit	Unknown	No Benefit/Harm
A				
B		Imipramine		
C		Propranolol		
I			Benzodiazpines Other Sympatholytics Other Antidepressants Anticonvulsants Atypical Antipsychotics Choral Hydrate	
D				Typical Antipsychotics

R_= level of recommendation (see appendix a)
Although the effectiveness of SSRI has been demonstrated for PTSD – it has not been tested in ASD and therefore can not be recommended.

OBJECTIVE

To lessen the physical, psychological, and behavioral morbidity associated with acute stress reaction, hasten the return to full function (duty, work, social role function), and diminish the likelihood of chronicity.

BACKGROUND

Stress reactions produce biologic, psychological, and behavioral changes. Biologic alterations include disruptions in neurochemicals, sleep patterns, hyper-arousal, and somatic symptoms (e.g., pain, gastrointestinal symptoms, etc). Psychological changes include: mood disturbances (e.g., labiality, irritability, blunting, numbing) anxiety (e.g., increased worry, ruminations) and cognitive disturbances (e.g., memory impairment, confusion, and impaired task completion. Different types of trauma can lead to ASD, from interpersonal assaultive violence to accidents to combat related trauma. For example, as many as ninety percent of individuals whom experience sexual assault will have acute stress symptoms (Breslau, 1996).

Empiric studies in ASD pharmacotherapy are lacking. To facilitate provision of physical needs, normalization, and psycho-education, it may be prudent to wait 24 to 48 hours before beginning medications. Pharmacotherapy may be aided by determining whether the patient suffers from excessive adrenergic arousal or symptoms of psychomotor withdrawal. If non-pharmacological treatments fail to improve symptomatology, and potential medical causes of neuropsychiatric impairment are ruled out, then medications may be considered.
The use of medications for short-term treatment of targeted symptoms may be beneficial (e.g. Insomnia).

RECOMMENDATIONS

1. Recommend provide for physical needs, sleep, normalization, and other non-pharmacological modalities.
2. Consider the use of medication for individuals that do not respond to non-pharmacological treatment.
3. Consider the use of imipramine to ameliorate the symptoms of ASD
4. Consider a short course of medication targeted for specific symptoms.

- Sleep disturbance/insomnia
  - Benzodiazepines (up to 5 days)
  - Chloral hydrate (up to 5 days)
- Hyperarousal/excessive arousal/panic attacks
  - Propranolol and other anti-adrenergic agents (up to 10 days)
  - Imipramine (up to 7 days)
  - Benzodiazepines (up to 5 days) avoid short acting agent [e,g, alprazolam])

5. There is insufficient evidence to support a recommendation for preventative use of a pharmacological agent to prevent the development of PTSD
6. There is insufficient evidence to support a recommendation for PTSD pharmacotherapies for patient presenting symptoms for less than 4 weeks.

DISCUSSION

Few studies have examined the effectiveness of pharmacological treatment for acute symptom management and PTSD prevention during the first four weeks following a traumatic event. There are no double-blind, placebo-controlled trials investigating the utility of benzodiazepines to prevent PTSD. Some descriptive studies do exist, however. The evidence for the use of benzodiazepines is mixed. In an open-label trial short-term use of benzodiazepine for sleep was associated with acute reduction in post-traumatic symptoms (Mellman et al., 1998). Four patients with acute stress symptoms that included disturbed sleep were treated within 1 to 3 weeks of trauma exposure with temazepam. The drug was administered for 5 nights, tapered for 2 nights, then discontinued. Evaluations 1 week after the last dose of medication revealed improved sleep and reduced stress symptoms.

Another open-label study found that early, more prolonged benzodiazepine use was associated with a higher rate of subsequent PTSD (Gelpin et al., 1996). This open study followed 13 patients that received clonazepam 2.7 mg/d $\pm$ 0.8 mg/d or alprazolam 2.5 mg/d within 6.7 $\pm$ 5.8 days of a traumatic event and 13 pair-matched trauma survivors for 6 months. Nine (69%) of the benzodiazepine-treated patients compared to only 3 (23%) of the control patients met criteria for PTSD (p = NS).

Propranolol may be considered for treatment of post-event hyperarousal. One study suggests that treatment with a beta-adrenergic blocker following an acute psychologically traumatic event may reduce subsequent post-traumatic stress disorder (PTSD) symptoms (Pitman et al., 2002). Within 6 hours of a traumatic event patients were randomized to a 10-day course of propranolol (n = 18) versus placebo (n = 23) 40 mg four times daily. The mean (SD) 1-month Clinician-Administered PTSD Scale (CAPS) score of 11 propranolol completers was 27.6 (15.7) compared to 20 placebo completer's average score of 35.5 (21.5) (t = 1.1, df = 29, p = 0.15). Two propranolol-treated patients' scores fell above, and nine below, the placebo group's median (p = 0.03,sign test). None of the eight propranolol-, but six of 14 placebo-treated patients were physiologic responders during script-driven imagery of the traumatic event when tested 3 months afterward (p = 0.04, one-tailed t-test). These pilot results suggest that acute, post-trauma propranolol may have a preventive effect on subsequent PTSD.

A prospective, randomized, double blind study of pediatric (mean age 8, range 2 – 29) burn patients determined the effect of imipramine (n=12) and chloral hydrate (n=13) on ASD symptoms for 7 days (Robert et al., 2000). These children had a mean total burn area of 45% and received a structured interview 3 times over the study period. Five of 13 (38%) patients that received chloral hydrate compared to 10 of 12 (83%) imipramine-treated patients (p<0.02) was considered improved.

There are no controlled trials of the usefulness of antihistamines or antidepressants for the management of ASD (Cochrane Database Pharmacotherapy Review 2002). Open trials and clinical experience with clonidine, guanfacine, and prazosin suggest they maybe useful for ASR; however, they have not been systematically studied.

There is insufficient research to support a recommendation for preventative use of a pharmacological agent to prevent the development of PTSD (Cochrane Systematic Review of PTSD 2002).

Future research should included additional studies of prevention and comparative trials between agents. Research questions that remain include the timing of non-pharmacological and pharmacological intervention(s), the type of

trauma and between drug class and within drug class response, dose-response trials, the relationship between treatment trial duration and outcome, the effects of demographics (e.g., age, gender, culture) on treatment outcomes, pharmacotherapy and psychosocial therapy interactions, the effect of co-morbid diagnoses on treatment response, and the psychobiologic correlates of treatment response. Also, the effect of clinical setting (e.g., military versus civilian), treatment-compensation interactions, and the effect of PTSD severity on outcome should be investigated. Standardization of assessment measures should be addressed that would include scales for individual symptoms, global assessment, and quality of life, as well as the psycholobiological correlates of treatment response.

EVIDENCE

	Recommendation	Sources	QE	Overall Quality	Net Effect	Grade
1	Provide for physical needs, sleep, normalization	Working Group Consensus	III	Poor	-	-
2	Pharmacological treatment for individuals not responding to attention to physical needs, sleep, and normalization	Working Group Consensus	III	Poor	-	I
3	Benzodiazepines for sleep disturbance/insomnia/hyperarousal/excessive arousal/panic attacks	Gelpin et al 1996 Mellman et al 1998 Mellman et al 1998	II-2	Fair	M	C
3	Chloral hydrate for sleep disturbance/insomnia	Robert et al 2000	I	Fair	S	C
3	Imipramine for hyperarousal/excessive arousal/panic attacks	Robert et al 2000	I	Fair	M	B
3	Propranolol for hyperarousal/excessive arousal/panic attacks	Pittman et al 2002	I	Good	M	C
4	Pharmacotherapy prophylaxis for PTSD	Cochrane Review 2002	I	Poor	-	I

QE = Quality of Evidence; R = Recommendation (see Appendix A)

B. POST-TRAUMATIC STRESS DISORDER (PTSD) PHARMACOTHERAPY

Table 2: Summary Table

R	Significant Benefit	Some Benefit	Unknown	No Benefit/Harm
A	SSRIs			
B		TCAs MAOIs		
C		Sympatholytics Novel Antidepressants		
I			Anticonvulsants Atypical Antipsychotics Buspirone Non-benzodiazepine hypnotics	
D				Benzodiazepines Typical Antipsychotics

R_= LEVEL OF RECOMMENDATION (SEE APPENDIX A)

OBJECTIVE

To minimize signs and symptoms of PTSD and maintain function.

BACKGROUND

There is growing evidence that PTSD is characterized by specific psychobiological dysfunctions, which has contributed to a growing interest in the use of medications to treat trauma-related biological effects .

RECOMMENDATIONS

MONOTHERAPY:

1. Strongly recommend selective serotonin reuptake inhibitors (SSRIs) for the treatment of PTSD.
2. Recommend tricyclic antidepressants (TCAs) and monoamine oxidase inhibitors (MAOIs) as second-line treatments for PTSD.
3. Consider an antidepressant therapeutic trial of at least 12 weeks before changing therapeutic regimen.
4. Consider a second-generation (e.g., nefazodone, trazodone, venlafaxine, mirtazapine, bupropion, etc) in the management of PTSD.

AUGMENTED THERAPY FOR TARGETED SYMPTOMS:

5. Consider prazosin to augment the management of nightmares and other symptoms of PTSD.
6. Recommend medication compliance assessment at each visit.
7. Since PTSD is a chronic disorder responders to pharmacotherapy may need to continue medication indefinitely; however it is recommended that maintenance treatment should be periodically reassessed.
8. There is insufficient evidence to recommend a mood stabilizer (e.g. lamotrigine) for the treatment of PTSD.
9. There is insufficient evidence to recommend atypical antipsychotics for the treatment of PTSD.
10. There is insufficient evidence to support the recommendation for a pharmacological agent to prevent the development of PTSD.

11. Recommend against the long-term use of benzodiazepines to manage core symptoms in PTSD.
12. Recommend against typical antipsychotics in the management of PTSD.

DISCUSSION

Antidepressants, particularly serotonergic reuptake inhibitors have proved effective in treating PTSD, and have been recommended as first-line agents in treatment guidelines (Davidson et al., 2001; Brady et al., 2000; Foa et al., 2000; Foa et al., 1999). Sertraline is the best-studied of the SSRIs, with four studies of over 100 participants each showing a significant response to the drug (Brady et al., 2000; Davidson et al., 2001b; Londborg et al., 2001; Rapaport et al., 2002). Significantly, the FDA has approved sertraline for the treatment of PTSD, and it is likely that other serotonergic drugs will be given FDA approval as the results of ongoing multicenter studies become available. Paroxetine has also been FDA approved, and two large studies (Marshall et al., 2001; Tucker et al., 2001) have demonstrated its usefulness in treating PTSD. Fluoxetine has also been shown to be useful (Barnett et al., 2002; Connor et al., 1999; Malik et al., 1999; Martenyi et al., 2002a; Martenyi et al., 2002b; Meltzer-Brody, et al., 2000). Citalopram and fluvoxamine have been less studied, although they too show promise for reducing PTSD symptoms.

Other medications used in PTSD include anticonvulsants, mood stabilizers (lithium), anxiolytics (benzodiazepines, beta-blockers and beta-adrenergic agonists), and other antidepressants (monoamine oxidase inhibitors and tricyclic antidepressants). In clinical practice there is a tendency to use polypharmacy in the treatment of PTSD, and also to use medications in conjunction with psychosocial treatments. However, studies examining the efficacy of these combined approaches area currently lacking (Halligan & Yehuda, 2001).

In a Cochrane Review, Stein et al. (2000) report on 22 RCTs in the pharmacological treatment of PTSD. Chronic PTSD was the primary diagnosis included in these studies; however, several addressed DESNOS and complex PTSD. The most common types of trauma studied were military combat, sexual abuse as a child or adult, physical abuse as a child or adult, or witnessing of a traumatic event. Also included were individuals who experienced accidents or natural disasters, or were the victims of a violent crime, torture, or terror.

Seventeen of the 22 RCT of pharmacological management of PTSD involved SSRIs (n = 8), MAOIs (n = 5), TCAs (n = 3) and trazodone (n = 1). Trials with SSRIs generally were of 12 weeks or longer and used clinician-administered evaluation of response. Overall, the antidepressant studies using global assessment (e.g., Clinical Global Improvement) and individual symptom assessment (e.g., intrusion, avoidance, hyperarousal) reported that drug treatment produced both statistically and clinically significantly reductions in symptoms compared to placebo. However, it is important to note that patients were rarely rated as "complete responders." A meta-analysis of 4 RCTs that compared SSRIs to placebo without regard to diagnostic criteria, duration, severity, or co-morbid diagnoses reported that treatment favored the drug in all 4 trials; however, only one study (with 183 subjects) reached statistical significance. Two RCTs maintained treatment with an SSRI for 64 weeks and 40 weeks, respectively. One study reported that 50% of patients experienced worsening symptoms when placebo was substituted for active drug and in the second report patients on placebo were 6.4 times more likely to relapse compared to the drug group. Although some patients may respond to an antidepressant trial within 3 months, some patients may require more than 12 weeks to respond to SSRIs (Martenyi et al 2002).

Stein et al. (2000) note that for TCAs (3 studies) and MAOIs (5 studies), methodological limitations of early trials included short-duration (5 weeks or less) and reliance on self-administered rating scales. Of the TCAs, nortriptyline is the only recently-studied drug (Dow et al., 1997; Zygmont et al., 1998). In a small study, Zygmont and his colleagues found the drug to be helpful in reducing traumatic grief symptoms (1998); Dow et al. found improvement in CGE for dual diagnosis after nortriptyline (1997). In the MAOI category, Neal et al. (1997) report significant improvement in symptoms in a small sample with the use of moclobemide, and Connor et al. (2001) report significant improvement in CAPS scores with brofaromine. In meta-analysis evaluations dropout rates between SSRIs, TCAs, and MAOIs secondary to drug side effects did not differ among the 3 groups or placebo (Stein et al., 2000).

Sympatholytics have also been investigated as PTSD therapy. Of the sympatholytics, prazosin and propranolol have been the subject of recent studies. In four relatively small studies (Raskind et al., 2003; Raskind et al., 2002; Raskind et al., 2000; Taylor & Raskind, 2002), prazosin has demonstrated a value in reducing nightmares and in

improving CAPS, CGI, and CGIC scores. Propranolol has been investigated for its ability to reduce stress and levels of recall (Pitman et al., 2002; Reist et al., 2001; Taylor & Cahill, 2002) and has shown promise in these areas. Emotional arousal has been shown to enhance memory, an effect that is blocked by propranolol suggesting that the noradrenergic system is important in the mechanism action (Reist et al., 2001). Because PTSD has as prominent features heightened arousal and distressing memories, the current study was undertaken to examine whether PTSD subjects differed from controls in emotional enhancement of memory. Seventeen subjects with PTSD and 21 controls received either placebo or 40 mg of propranolol prior to exposure to either an emotionally arousing or emotionally neutral, narrated slide story. PTSD and control subjects did not differ in the acquisition and retention of memories under emotionally arousing or emotionally neutral conditions.

It has been suggested that an adrenergic receptor-blocker could be used to diminish, if not alleviate, the target symptoms of PTSD. Severely traumatized Cambodian refugee patients (N = 68) who suffered from chronic PTSD and major depression improved symptomatically when treated with a combination of clonidine and imipramine (Kinzie et al., 1989). A prospective pilot study of nine patients using this combination of an alpha-2 adrenergic agonist and a tricyclic antidepressant resulted in improved symptoms of depression in six patients, five to the point that DSM-III-R diagnoses were no longer met. The average decrease in the Hamilton Rating Scale for Depression score was 16. PTSD global symptoms improved in six patients but only in two to the point that DSM-III-R diagnoses were not met. There was no further sleep disorder in five and the frequency of nightmares lessened in seven patients. Startle reaction improved only in four patients; avoidance behavior showed little improvement in any of the nine. The imipramine-clonidine combination was well tolerated and presents a promising treatment for severely depressed and traumatized patients, although further studies are needed. Overall, however, there is insufficient evidence to recommend the routine use of sympatholytics (e.g., propranolol, clonidine, prazosin, guanfacine) in PTSD.

There are no RCTs for novel antidepressants in the literature. Nefazodone, however, has been the subject of several recent small- to mid-sized case-control studies (Davis et al., 2000; Garfield et al., 2001; Gillin et al., 2001; Hertzberg et al., 1998; Hidalgo et al., 1999; Zisook et at., 2000). In all six studies, the drug was helpful in improving CAPS, HAM-D, sleep, and anxiety. Trazodone, venlafaxine, and mirtazapine have also shown promise in some small descriptive studies. Although nefazodone now has some evidence-based support, overall there is insufficient literature to recommend the use of novel antidepressants (e.g., bupropion, nefazodone, venlafaxine, trazodone) for PTSD pharmacotherapy.

Mood stabilizers/anticonvulsants are another category of potential PTSD medications. Some evidence is available to support the use of lamotrigine for PTSD therapy. In a small RCT (n = 14), Hertzberg et al. (1999) evaluated lamotrigine (maximum dose 500 mg/day) against placebo. The authors report that "of 10 patients who received lamotrigine, 5 (50%) responded according to the DGRP [PTSD scale], compared to 1 of 4 (25%) who received placebo. Lamotrigine patients showed improvement on reexperiencing and avoidance/numbing symptoms compared to placebo patients. Treatments were generally well tolerated." Non-RCT evidence also provides limited support for the use of mood stabilizers/anticonvulsants. Topiramate seems to reduce nightmares (Berlant, 2002; Berlant, 2001); valproate reduces hyperarousal in some patients (Clark et al., 1999; Fesler, 1991; Ford, 1996); and carbamazepine (Ford, 1996) and gabapentin (Brannon et al., 2000; Hamner et al., 2001) also appear to be helpful. Again, though, the overall quality of the evidence is insufficient to call for a routine recommendation for use of these agents.

Though benzodiazepines are widely used for symptomatic control of insomnia, anxiety, and irritability, there is no evidence they reduce the core symptoms (e.g., syndromal symptoms) of PTSD, such as avoidance or dissociation (Friedman and Southwick 1995, Viola et al 1997). At Tripler Army Medical Center, after having treated 632 patients, the vast majority of whom suffered from combat-related PTSD, between 1990 and 1996, the staff began to "explore treatment alternatives" to benzodiazepines due to the "risks attendant to benzodiazepine management of PTSD, coupled with poor clinical outcome" (Viola et al., 1997). More recent studies have been scarce, and only Kosten et al. (2000) presents recent evidence. This study does not support the use of benzodiazepines in PTSD.

The typical antipsychotics chlorpromazine and thioridazine each have one case report of their use in PTSD (Leber et al., 1999; Dillard et al., 1993). No other studies of this class of agents for PTSD were found. Second-generation antipsychotics are better studied. Most of the studies, however, are case-control or descriptive. Only two RCTs exist for this class of agents; Stein et al. (2000) investigate the use of olanzapine and report a significant response in

some measures, but not in global response. Hamner et al. (2003) tested risperidone in a small sample of patients with comorbid psychoses and reported some effect. As with other drug classes, there is insufficient literature to recommend the use of atypical antipsychotics (olanzapine, quetiapine, risperidone, ziprasidone, aripiperazole) to recommend their routine use in PTSD.

Zolpidem, a nonbenzodiazepine hypnotic, has been the subject of two studies (Dieperink & Drogemuller, 1999; Lavie, 2001 [review]). The drug appears to be characterized by a good response and fewer side effects than other agents. Buspirone, a nonbenzodiabepine antianxiety drug, is reported to have "clinical efficacy" in two very small studies (Duffy & Malloy, 1994; Wells et al., 1991).

There are gender differences in the pharmacokinetics (e.g., absorption, distribution, metabolism, and elimination) of men and women (Brady KT, Back SE, Gender and the Psychopharmalogical treatment of PTSD in Gender and PTSD, Kimerling, Ouimette, Wolfe, Guilford Press, London). For absorption, differences in gastric motility, gastric pH, and enzyme activity may vary between men and women; however, the clinical magnitude of these differences has not been determined. Issues such as differences in body weight, blood volume, plasma protein binding, and lean body mass to adipose tissue ratio may affect serum levels of medications. For example, women tend to have lower plasma protein binding than men, which may lead to a greater level of active drug. For drug metabolism via the liver, pre-menopausal women have higher CYP3A4 activity compared to men and post-menopausal women, which may lead to lower levels of benzodiazepines, for example. In addition, the effect of pregnancy, lactation, hormone replacement treatment, and the menstrual cycle on the pharmacokinetics of psychotropic medications needs to be studied further.

Future research should included additional studies of prevention and comparative trials between agents. Research questions that remain include the timing of non-pharmacological and pharmacological intervention(s), the type of trauma and between drug class and within drug class response, dose-response trials, the relationship between treatment trial duration and outcome, the effects of demographics (e.g., age, gender, culture) on treatment outcomes, pharmacotherapy and psychosocial therapy interactions, the effect of co-morbid diagnoses on treatment response, and the psyohobiologic correlates of treatment response. Also, the effect of clinical setting (e.g., military versus civilian), treatment-compensation interactions, and the effect of PTSD severity on outcome should be investigated. Standardization of assessment measures should be addressed that would include scales for individual symptoms, global assessment, and quality of life, as well as the psychobiological correlates of treatment response.

EVIDENCE

	Recommendation	Key Study	QE	Overall Quality	Net Effect [M- Moderate S- Small[	Grade
1	SSRIs	Stein et al., 2000, Cochrane Review	I	Good	M	A
2	TCAs	Stein et al., 2000, Cochrane Review	I	Good	M	B
2	MAOIs	Stein et al., 2000, Cochrane Review	I	Good	M	B
3	Antidepressant therapeutic trial	Martenyi et al 2002	I	Fair	M	B
4	Second-generation antidepressants	Hidalgo et al., 1999	II-2	Fair	S	C
5	Prazosin	Raskind et al., 2003	I	Fair	M	C
6	Check medication compliance at each visit	Group Consensus	III	Poor	-	I
7	Maintenance treatment	Rapaport et al 2002	II	Fair	S	C
8	Mood stabilizers	Hertzberg et al., 1999	I	Fair	M	C

9	Atypical antipsychotics	Hamner et al., 2003	I	Good	S	I
10	Pharmacotherapy prophylaxis of PTSD	Cochrane Review 2000	III	Poor	S	I
11	Benzodiazepines	Kosten et al., 2000	II-2	Fair	M	I
12	Typical antipsychotics	Stein et al., 2000, Cochrane Review	I	Poor	S	D

R_= LEVEL OF RECOMMENDATION (SEE APPENDIX A)
Not available in US
**FDA approved

Table 3: Symptom Response by Drug Class and Individual Drug (based on controlled and uncontrolled trials)

		Global Improvement	Re-experiencing (B)	Avoidance/ Numbing (C)	Hyper-arousal (D)
SSRIs					
	Fluoxetine	X	X	X	X
	Sertraline	X		X	X
	Paroxetine	X	X	X	X
TCAs		X	X		
MAOIs		X	X	X	
Sympatholytics			X		X
	Prazosin	X			
	Propranolol				
Novel Antidepressants					
	Trazodone		X	X	X
	Nefazodone		X	X	X
Anticonvulsants					
	Carbamazepine		X		X
	Valproate			X	X
Benzodiazepines					X
Atypical antipsychotics			X		X

Table 4: Drug Details Table

Agent	Oral Dose	Absolute/Relative Contraindications	Adverse Events	Remarks
Selective Reuptake Serotonin Inhibitors (SSRIs)				
Fluoxetine Paroxetine Sertraline Fluvoxamine Citalopram	20 – 60 mg/d 20 – 60 mg/d 50 – 200 mg/d 50 – 150 mg bid 20 – 60 mg/d	**Contraindications** • MAO inhibitor within 14 days **Relative contraindication** • Hypersensitivity	• Nausea • Headache • Sexual dysfunction • Hyponatremia/SIADH (Syndrome of Inappropriate Antidiuretic Hormone) • Serotonin syndrome	• Avoid abrupt discontinuation of all except fluoxetine • Citalopram and sertraline are less likely to be involved in hepatic enzyme drug interactions • Fluoxetine and fluvoxamine are generically available • Therapeutic blood levels not established for PTSD
Tricyclic Antidepressants				
Imipramine Amitriptyline Desipramine Nortriptyline Protriptyline Clomipramine	150 – 300 mg/d 150 – 300 mg/d 100 – 300 mg/d 50 – 150 mg/d 30 – 60 mg/d 150 – 250 mg/d	**Contraindications** • Clomipramine – seizure disorder • MAOI use within 14 days • Acute MI within 3 months **Relative Contraindications** • Coronary artery disease • Prostatic enlargement	• Anticholinergic effects • Orthostatic hypotension • Increased heart rate • Ventricular arrthymias	• Therapeutic blood levels not established for PTSD • Desipramine and nortriptyline have lower rate of anticholinergic and hypotensive effects
Monoamine Oxidase Inhibitors				
Phenelzine Tranylcypromine	Target 1 mg/kg/d Target 0.7 mg/kg/d	**Contraindications** • All antidepressants within 7 days of start of a MAOI, except fluoxetine is 5 weeks • CNS stimulants and decongestants	• Hypertensive crisis with drug/tyramine interactions • Bradycardia • Orthostatic hypotension • Insomnia	• Patient must maintain tyramine-free diet • Doses should be taken in the morning to reduce insomnia
Sympatholytics				

Propranolol Prazosin	40 mg/d *target 6 – 10 mg/d* *Start with 1 mg at bedtime and increase as blood pressure allows.*	Propranolol – sinus bradycardia, congestive heart failure	• Propranolol – hypotension, bronchospasm, bradycardia • • Prazosin – first dose syncope	• Propranolol has only been used in a single dose for prevention of PTSD • • Prazosin primarily used for management of recurrent distressing dreams

Agent	Oral Dose	Absolute/Relative Contraindications	Adverse Events	Remarks
Novel Antidepressants				
Bupropion Nefazodone Trazodone Venlafaxine	150 – 450 mg/d 300 – 600 mg/d 300 – 600 mg/d 150 – 375 mg/d	**Contraindications** • MAOI use within 14 days • Bupropion – single doses of regular-release >150 mg/d and total daily dose >450 mg/d. Reduce dose in low-weight patients **Relative Contraindications** • Bupropion – seizure disorder	• Trazodone and nefazodone – sedation, rare priapism • • Venlafaxine – hypertension in patients with pre-existing hypertension	• Need to taper venlafaxine to prevent rebound signs/symptoms • • The group has a lower rate of sexual dysfunction compared to SSRIs
Anticonvulsants				
Carbamazepine	Target 400 – 1600 mg/d	• Bone marrow suppression, particularly leukopenia	• Leukopenia, SIADH, drowsiness, ataxis	• Therapeutic blood levels not established for PTSD
Gabapentin	Target 300 – 3600 mg/d	• Renal impairment	• sedation, ataxia	
Lamotrigine	Target 25 – 500 mg/d. Start 25 mg qod x 2 weeks, then 25 mg qd x 2 weeks, then 25 – 50 mg qd q1-2 weeks to 400 mg/d or as tolerated.	• Increased rash with valproate; max dose of 200 mg	• Stevens- Johnson syndrome, fatique	

Topiramate	Target 200 – 400 mg/d. Start with 25 – 50 mg/d and increase by 15 – 50 mg/week to maximum dose or as tolerated.	• Hepatic impairment	• Angle closure glaucoma, secondary, sedation, dizziness, ataxia	
Valproate	target 10 – 15 mg/kg/d	• Impaired liver function, thrombocytopenia	• Nausea/vomiting, sedation, ataxia, thrombocytopenia	
Benzodiazepines				
Clonazepam Lorazepam Alprazolam Diazepam	Start - 0.25 mg bid, increase by 0.25 mg q1-2 days; maximum 20 mg/d 2 – 4 mg/d 1.5 to 6 mg/d 10 - 40 mg/d	• Caution in elderly patients and patients with impaired liver function. • Risk of abuse in patients with history of substance abuse	• Sedation • Memory impairment • Ataxia • Dependence	• If doses sustained > 2 months at therapeutic doses, then drug should be tapered over 4-week period • • Alprazolam – concern with rebound anxiety
Typical antipsychotics				
Chlorpromazine Haloperidol Thioridazine	100 – 800 mg/d 2 – 20 mg/d 100 – 800 mg/d	**Contraindication** • Parkinson's disease • QTc prolongation	• Sedation • Orthostatic hypotension with chlorpromazine, thioridazine • Akathisia • Dystonia • Drug-induced parkinsonism • Tardive dyskinesia may occur with all antipsychotics with long-term use. • Neuroleptic malignant syndrome • QTc changes	• Therapeutic doses not established in the treatment of PTSD • Use should be well justified in medical record because of the risk of tardive dyskinesia. • Maximum daily dose of thioridazine is 800 mg/d because of pigmentary retinopathy

Atypical antipsychotics				
Olanzapine Quetiapine Risperidone	5 – 20 mg/d 300 – 800 mg/d 1 – 6 mg/d	• Relative contraindication • Diabetes • Obesity • Parkinson's disease	• Sedation • Weight gain • Neuroleptic malignant syndrome • Higher doses may cause akathisa, drug-induced parkinsonism, especially with risperidone doses >6 mg/d	• Therapeutic doses not established for PTSD • Weight gain occurs with all agents; however, olanzapine produces significantly greater gain • The relative risk of tardive dyskinesia compared to typical antipsychotics has not been established for these agents
Non-benzodiazepine				
hypnotics - zaleplon - zolpidem	 5 – 10 mg/d 5 – 10 mg/d	• Caution with alcohol/drug abuse history • Caution in elderly and patients with liver dysfunction	• Sedation • Ataxia • Rebound insomnia may occur	• Abuse has occurred resulting in withdrawal reactions
anti-anxiety - buspirone	 20 – 60 mg/d	**Contraindication** • MAOI use within 14 days	• Nausea • Headache	

Table 5: Summary of Evidence

Drug	Source of Evidence	Result	n	QE	Quality	R
SSRI						
Sertraline (FDA approved)	*Brady et al., 2000	Significant improvement, CAPS-2, CGI	187	I	G	A
	Davidson et al., 2002	Study of effect on individual symptoms	?	II-2	F	
	Davidson et al., 2001a	Effective for prevention of PTSD relapse	96	I	G	
	Davidson et al., 2001b	Significant responder rate, CAPS-2	208	I	G	
	Davidson et al.,2001c	Effective for preventing PTSD relapse	96	I	G	
	Londborg et al., 2001	Significant response maintained x 36 weeks	128	II-1	G	
	Rapaport et al., 2002	Significant response maintained x 64 weeks	359	I/II-1	G	
	Smajkic et al., 2001	Significant improvement, Bosnian refugees	15	II-2	F	
	Zohar et al., 2002	Numeric advantage (only), Israeli vets	42	I	G	
Paroxetine (FDA approved)	Marshall, et al., 2001	Significant improvement, CAPS-2 & CGI	551	I	G	A
	Smajkic et al., 2001	Significant improvement, Bosnian refugees	12	II-2	F	
	Tucker, et al., 2001	Significant improvement, CAPS-2	307	I	G	
Fluoxetine	Barnett et al., 2002	Study of tolerability. Well-tolerated	65	I	G	A
	*Connor et al., 1999	"Superior" response for civilian patients	53	I	G	
	Hertzberg et al., 2000	No response for combat vets with severe s/s	12	I	F	
	Malik et al., 1999	Significant improvement on SF-36	16	I	F	
	Martenyi et al., 2002a	Effective for prevention of PTSD relapse	131	I	G	
	Martenyi et al., 2002b	Effective: improvement in TOP-8, CGI	301	I	G	
	Meltzer-Brody, et al., 2000	Reduced all symptom clusters of PTSD	53	II-2	F	
Citalopram	Blaha et al., 1999	Reduction in PTSD and scarring, burn pts.	?	III	P	C
	Khouzam et al., 2001	Remission of some s/s for Gulf War vets	2	III	P	
	Seedat et al., 2000	Significant improvement, CAPS-2	14	II-1	F	
Fluvoxamine (not on VA formulary)	Escalona et al., 2002	Appears to improve PTSD symptoms	15	III	P	I
	Neylan et al., 2001	Improved sleep quality for Vietnam vets	21	III	P	
TCA						
Amitriptyline	*Davidson et al., 1990	Effective for core symptoms of PTSD	46	I	G	B
	Davidson et al., 1993	Significant improvement: IES, CGI, HAMD	62	I	G	
Clomipramine	Muraoka et al., 1996?	One case report	1	III	P	I
Desipramine	*Reist et al., 1989	Did not show efficacy; no statistics	27	III	P	I
Imipramine	*Kosten et al., 1991	Significant improvement, CAPS-2, IES	41	I	G	B
Nortriptyline	Zygmont et al., 1998	Effective for traumatic grief symptoms	22	II-1	G	B
	Dow et al., 1997	Improvement in CGE for dual diagnosis	?	?	F	
Protriptyline	No studies, 1990-2003					
MAOI/RIMA						
Brofaromine	*Baker et al., 1995	Trial did not show efficacy over placebo	146	I	G	B
	Connor et al., 2001	Significant improvement in CAPS	177	I	G	
	*Katz et al., 1994	Significant improvement in CAPS-2 & CGI	64	I	G	
Phenelzine	*Kosten et al., 1991	Significant improvement in IES	37	I	G	B
	*Shestatzky et al., 1988	Did not show efficacy; no statistics	13	III	P	
Moclobemide	Neal et al., 1997	Significant improvement	20	II-1	G	B
Sympatholytics						
Clonidine	Kinzie & Leung, 1989	Cambodian refugees improved, dual therapy	68	III	P	I
Guanfacine	Horrigan & Barnhill, 1996	suppression of PTSD associated nightmares in children	1	III	P	C
Prazosin	Raskind et al., 2003	Significant improvement, CAPS, CGI	10	I	F	C

Drug	Source of Evidence	Result	n	QE	Quality	R
	Raskind et al., 2002	Significant improvement in dream scores	59	II-2	F	
	Raskind et al., 2000	Improvement in nightmare item, CAPS	4	II-2	F	
	Taylor & Raskind, 2002	Improvement in CGIC and nightmares	5	II-2	F	
Propranolol	Finestone & Manly, 1994	Dissociation precipitated by propranolol	1	III	P	C
	Pitman et al., 2002	Significant improvement post acute stress	41	I	G	
	Reist et al., 2001	Recall of arousing story was reduced	38	II-2	F	(acute)
	Taylor & Cahill, 2002	Effective for reemergent PTSD s/s	1	III	P	
Novel Antidepressants						
Bupropion	Canive et al., 1998	No change in total CAPS score - male combat veterans,	17	II-2	F	I
Nefazodone	Davis et al., 2000	Significant improvement in CAPS, HAM-D	36	II-2	G	C
	Garfield et al., 2001	Significant improvement in CAPS, anxiety	14	II-2	F	
	Gillin et al., 2001	Significant improvement in sleep, CAPS	12	II-2	F	
	Hertzberg et al., 1998	CGI scores were "much improved"	10	II-2	F	
	Hidalgo et al., 1999	High response rate; pooled data, 6 studies	105	II-2	F	
	Zisook et al., 2000	PTSD symptoms lessened, CAPS	19	II-2	F	
Trazodone	Hertzberg et al., 1996	Four patients "much improved"	6	III	P	I
	Warner et al., 2001	Reduction in nightmares; 9 reports priapism	74	III	III	
Venlafaxine	Hamner et al., 1998	Case report of positive response	1	III	P	I
	Smajkic et al., 2001	Significant improvement, Bosnian refugees	5	II-2	F	
Mirtazapine	Bahk et al., 2002	Significant improvement in IES, MADRS	15	III	P	I
	Connor et al., 1999	Clinical improvement in > 50% of patients	6	III	P	
	Davidson et al., 2003	Significant improvement in the SPRINT, SIP, DTS as compared to placebo	26	I	G	
Mood Stabilizers/Anticonvulsants						
Carbamazepine	Ford, 1996	Case report of a positive response	1	III	P	I
Gabapentin	Brannon et al., 2000	Case report of a positive response	1	III	P	C
	Hamner et al., 2001	Effective for insomnia, adjunct treatment	30	II-2	F	
Lamotrigine	*Hertzberg et al., 1999	Promising results	14	I	F	C
Topiramate	Berlant, 2002	Significant suppression of nightmares	35	II-1	F	C
	Berlant, 2001	Case report of positive response	3	III	P	
Valproate	Clark et al., 1999	Significant ↓ intrusion, hyperarousal, HAM	16	II-2	F	C
	Fesler, 1991	Significant ↓ hyperarounsal in Vietnam vets	16	II-2		
	Ford, 1996	One case report of a + response	1	III		
Benzodiazepines						
Benzodiazepines	Kosten et al., 2000	Not associated with adverse outcomes	370	II-2	F	I
Alprazolam	*Braun et al., 1990 (concern: rebound anxiety)	Did not show efficacy.	16	II-2	F	D
	Gelpin et al., 1996	No beneficial effect	16	II-1	F	
	Risse et al., 1990	Withdrawal s/s after discontinuation	8	III	P	
	Shalev et al., 1998	No effect on response to loud tones	9	III	F	
Clonazepam	Fossey & Hamner, 1994	A source of sexual dysfunction	42	III	P	I
	Gelpin et al., 1996	No beneficial effect in PTSD	20	II-1	F	
	Shalev & Rogel-Fuchs, 1992	No effect on auditory startle	N/A	III	F	
Lorazepam	Tulen et al., 1991	Physiological endpoints only (HR)	9	I	F	I
Temazepam	Mellman et al., 1998	Short-term for acute stress, + response	4	III	P	I
Typical Antipsychotics						
Chlorpromazine	Leber et al., 1999	One case report	1	III	P	D
Thioridazine	Dillard et al., 1993	One case report of a + response	1	III	P	D
Haloperidol	No studies, 1990-2003					

Drug	Source of Evidence	Result	n	QE	Quality	R
Second-generation Antipsychotics						
Clozapine	Hamner, 1996	One case report of a + response	1	III	P	I
Olanzapine	Butterfield et al., 2001	No beneficial effect. High placebo response	15	I	G	I
	Labbate & Douglas, 2000	Letter				
	Petty et al., 2001	Significant improvement in CAPS, CGI	48	II-1	G	
	Prior, 2001	Letter				
	Roefaro & Mukherjee, 2001	Therapy-induced hyperglycemic coma	1	III	P	
	Stein et al., 2002	Adjunct to SSRI. Significant improvement in measures, but not in global response	19	I	F	
Quetiapine	Hamner et al., 2003	Significant improvement in CAPS	20	II-1	F	I
	Sattar et al., 2002	One case report of a + response	1	III	P	
Risperidone	Eidelman, et al., 2000	4 cases of flashbacks, post physical trauma	4	III	P	I
	Hamner et al., 2003	Adjunct to other meds, comorbid psychoses	40	I	G	
	Krashin & Oates, 1999	Two case reports of a + response	2	III	P	
	Leyba, 1998	4 cases of a + response	4	III	P	
	Monnelly & Ciraulo, 1999	1 case of a + response	1	III	P	
	Stanovic et al., 2001	Burn patients reported fewer symptoms	10	III	P	
Ziprasidone	Haddad & Anderson, 2002	Review of the issue of QTc prolongation	N/A			
Nonbenzodiazepine Hypnotics						
Zolpidem	Dieperink & Drogemuller, 1999	25 cases of a + response	32	III	P	I
	Lavie, 2001 (review)	Fewer side effects for this class, in general	N/A			
Zaleplon	No studies, 1990-2003					
Zopiclone	No studies, 1990-2003					
Non-Benzodiazepine Antianxiety						
Buspirone	Duffy & Malloy, 1994	Significant improvement, SI-PTSD & BDI	8	II-2	F	I
	Wells et al., 1991	"Clinical efficacy"	3	III	P	

* in Stein et al., 2000 (Cochrane Review)

Studies of pharmacotherapy for PTSD in individuals exposed to trauma that assessed clinical outcomes were included. Evidence from randomized controlled trials was considered to be of highest quality, followed by observational evidence. Other sources were evaluated when randomized controlled trials and observational studies were not available or did not provide adequate evidence. Studies were excluded if they did not evaluate response to pharmacotherapy and if they did not evaluate individuals exposed to trauma.

C. PSYCHOTHERAPY INTERVENTIONS

OBJECTIVE

Reduce of symptoms severity and improve of global functioning.

Table 6: Summary Table

R	Significant Benefit	Some Benefit	Unknown	Harm
A	Cognitive Therapy [CT] Exposure Therapy [ET] Stress Inoculation Training [SIT] Eye Movement Desensitization and Reprocessing [EMDR]			
B		Imagery Rehearsal Therapy [IRT] Psychodynamic Therapy		
C				
D				
I		PTSD - Patient Education		

R_ = level of recommendation (see appendix A)

Table 7. Adjunctive Treatments

B	Dialectical Behavioral Therapy [DBT]
B	Hypnosis

Table 8. Adjunctive Problem-Focused Methods/Services

	If the client and clinician together conclude that the patient with PTSD:	Service/Training
1.	Is not fully informed about aspects of health needs and does not avoid high-risk behaviors (e.g., PTSD, substance)	*Provide patient education*
2.	Does not have sufficient self-care and independent living skills	*Refer to self-care/independent living skills training services*
3.	Does not have safe, decent, affordable, stable housing that is consistent with treatment goals	*Use and/or refer to supported housing services*
4.	Does not have a family that is actively supportive and/or knowledgeable about treatment for PTSD	*Implement family skills training*
5.	Is not socially active	*Implement social skills training*
6.	Does not have a job that provides adequate income and/or fully uses his or her training and skills	*Implement vocational rehabilitation training*
7.	Is unable to locate and coordinate access to services such as those listed above	*Use case management services*
8.	Does request spiritual support	*Provide access to religious/spiritual advisors and/or other resources*
	OTHER CONDITIONS	
9.	Does have a borderline personality disorder typified by parasuicidal behaviors	*Consider Dialectical Behavioral Therapy*
10.	Does have concurrent substance abuse problem	*Integrated PTSD substance abuse treatment (e.g., Seeking Safety)*

Hospitalization:
There have been no satisfactory studies on **inpatient** treatment for patients with PTSD, in trauma-related conditions. Clinical consensus supports that it is appropriate for crisis intervention, management of complex diagnostic cases, delivery of emotionally intense therapeutic procedures, and relapse prevention.

RECOMMENDATIONS

1. Providers should explain to all patients with PTSD the range of available and effective therapeutic options for PTSD. [Expert Consensus]
2. **Cognitive Therapy [CT], Exposure Therapy [ET], Stress Inoculation Training [SIT],** and Eye Movement Desensitization and Reprocessing **[EMDR]** are strongly recommended for treatment of PTSD in military & non-military populations. EMDR has been found to be as effective as other treatments in some studies and less effective than other treatments in some other studies. [A*]
3. **Imagery Rehearsal Therapy [IRT]** and **Psychodynamic Therapy** may be considered for treatment of PTSD. [B*]
4. **Patient education** is recommended as an element of treatment of PTSD for all patients. [C*]
5. Consider **Dialectical Behavioral Therapy** (DBT) for patients with a borderline personality disorder typified by parasuicidal behaviors. [B]
6. Consider **hypnotic techniques** especially for symptoms associated with PTSD, such as pain, anxiety, dissociation and nightmares, for which hypnosis has been successfully used. [*B]
7. Specialized PTSD psychotherapies may be augmented by additional problem specific methods /services, and pharmacotherapy. [Expert Consensus]

8. Combination of cognitive therapy approaches (e.g., ET plus CT), while effective, has not proven to be superior to either component alone. [B]
9. Specific psychotherapy techniques may not be uniformly effective across all patients. When selecting a specific treatment modality, consideration of patient characteristics such as gender, type of trauma (e.g., combat vs. other trauma), and past history may be warranted. [Expert Consensus]
10. Patient and provider preferences should drive the selection of evidence-based psychotherapy and/or evidence-based pharmacotherapy as the first line treatment. [Expert Consensus]
11. Selection of individual interventions should be based upon patient preference, provider level of skill and comfort with a given modality, efforts to maximize benefit and minimize risks to the patient, and consideration of feasibility and available resources. [Expert Consensus]
12. Psychotherapies should be provided by practitioners who have been trained in the particular method of treatment, whenever possible. [Expert Consensus]
13. A stepped care approach to therapy administration may be considered, though supportive evidence is lacking. [Expert Consensus]

* detailed evidence tables for each therapy are included in the applicable DISCUSSION sections.

Note: Psychotherapy interventions are aimed at reduction of symptoms severity and improvement of global functioning. However, the clinical relevance and importance of other outcome indicators (e.g., improvement of quality of life, physical & mental health) are not currently well known.

Supportive psychotherapy is not considered to be effective for the treatment of ptsd. However, if the patient has reasonable control over his/her symptoms and is not in severe and acute distress, the goal may be to prevent relapse and supportive therapy may be helpful in that endeavor. Or, for the patient with certain co-morbid disorders, supportive therapy may be all they can tolerate without causing additional harm. Psychodynamic, interpersonal, experiential (e.g., Gestalt therapy), and many other approaches may also be beneficial parts of an effectively integrated approach. Most experienced therapists integrate diverse therapies, which are not mutually exclusive in a fashion that is designed to be especially beneficial to a given patient.

A. Selection Of Therapy For PTSD

In clinical practice, providers and patients alike are often faced with important decisions relating to type, number, frequency, and dose of various psychotherapies and pharmacologic therapies. Therapies may be broadly divided into (1) evidence-based psychotherapies, (2) evidence-based pharmacotherapies, and (3) key adjunctive or supplemental treatment modalities. Providers should explain to all patients with PTSD the range of therapeutic options that are available and effective for PTSD. This discussion should include general advantages and disadvantages (including side-effects) associated with each therapeutic option. In general, PTSD therapy research has provided insufficient evidence to favor medication or evidence-based psychotherapy as a first-line treatment. There is also insufficient evidence to suggest for or against combined medication and psychotherapy over only one of the two approaches.

It may be helpful to add therapies using a stepped care approach, even though supporting evidence does not exist. The use of stepped care has been advocated for many chronic conditions including hypertension, low back pain, and depression. In stepped care, the intensity of care is augmented for patients who do not achieve an acceptable outcome with lower levels of care. Stepped care is based on three assumptions: different people require different levels of care; finding the right level of care often depends on monitoring outcomes; and moving from lower to higher levels of care based on patient outcomes often offers efficient increases in overall effectiveness.

The level or intensity of care is guided by illness trajectory (degree of chronicity and current illness severity), observed outcomes, and previously attempted therapies. Active follow-up is used to determine the level of care each patient requires over time. In PTSD for example, the patient and provider may determine that the first-line therapy will be psychotherapy. If, after a period of treatment, the patient is not responding adequately, the patient may be "stepped up" in therapeutic intensity by adding a medication, such as a selective serotonin reuptake inhibitor (SSRI) to the regimen of ongoing psychotherapy.

Contrary to clinical intuition, there is no evidence indicating the superiority of programs that combine different cognitive behavioral therapies (Rothbaum, 2001).

B. Cognitive Therapy (CT)

BACKGROUND

Aaron Beck, at the University of Pennsylvania, developed Cognitive Therapy (CT) as a structured, short term, present-oriented psychotherapy for depression (Beck, 1964). It is an approach that focuses on improving mood by modifying dysfunctional thinking and behavior. Beck and others have successfully adapted CT to the treatment of a diverse set of psychiatric disorders, including PTSD (Freeman & Datillo, 1992; Freeman et al., 1989; Scott et al., 1989).

CT for PTSD typically begins with an introduction of how thoughts affect emotions and behavior. The cognitive model of change and expectations for participation in therapy is reviewed. Early in treatment, new skills to identify and clarify patterns of thinking are taught using techniques such as recording thoughts about significant events, identifying distressing trauma-related thoughts, and converting such dysfunctional thought patterns into more accurate thoughts. CT also emphasizes the identification and modification of distorted core beliefs about self, others, and the larger world. CT teaches that improved accuracy of thoughts and beliefs about self, others, and the world leads to improved mood and functioning.

DISCUSSION

Randomized controlled trials (RCTs) have shown that CT is an effective intervention for patients with PTSD (Lovell et al., 1998; Marks et al., 2001). It is useful for identifying and modifying the many negative beliefs related to a traumatic experience. CT can be used effectively to reduce distressing trauma-related thoughts (e.g., about survival guilt, self-blame for causing the trauma, feelings of personal inadequacy, or worries about the future). Modifying thoughts about these and other trauma-related issues can reduce PTSD symptoms and improve mood and functioning.

In RCTs, Lovell et al. (2001) and Marks et al. (1998) indicated that CT can produce a substantial treatment effect for civilian men and women with PTSD resulting from a variety of non-combat-related traumas. There are no RCTs that specifically evaluate the use of CT in military or veteran PTSD patients; however, the use of CT in this population is recommended based on expert consensus.

CT techniques are often delivered as part of treatment "packages" that can include exposure therapy, trauma-related education, and anxiety management. For example, Cognitive Processing Therapy, which has been manualized and validated for use with female sexual assault–related PTSD in women (Resick et al., 2002), combines aspects of CT and exposure therapy. CT can also be delivered in conjunction with a range of other psychological therapies (e.g., EMDR and psychodynamic therapy). CT techniques may be an especially helpful treatment component when co-morbid depressive and/or anxiety disorders are present.

Contraindications for CT have not been empirically established, but may include psychosis, severe brain damage, or severe intellectual impairment.

EVIDENCE

	Recommendation	Sources	QE	Overall Quality	R
1	CT is effective with civilian men and women exposed to combat and non-combat trauma.	Lovell, et al., 2001 Marks et al., 1998	I	Good	A
2	CT is effective with military and veterans with combat- and non-combat-related PTSD.	Working Group Consensus	III	Poor	I
3	CTis effective for women with PTSD associated with sexual assault.	Resick et al., 2002	I	Good	A

QE = Quality of Evidence; R = Recommendation (see Appendix A)

C. **Exposure** Therapy (ET)

BACKGROUND

RCTs have shown that Exposure Therapy (ET) helps men and women with PTSD reduce the fear associated with their experience through repetitive, therapist-guided confrontation of feared places, situations, memories, thoughts, and feelings. ET usually lasts from 8 to 12 sessions depending on the trauma and treatment protocol. Patients are repeatedly exposed to their own individualized fear stimuli, until their arousal and fear responses are consistently diminished. In session exposure is often supplemented by therapist-assigned and monitored self-exposure to the memories or situations associated with traumatization. ET providers can vary the pacing and intensity of exposing patients to the most frightening details of their trauma based on the patient's emotional response to the trauma and to the therapy itself.

Exposure can be accomplished via "imaginal" exposure or "in vivo" exposure. Imaginal exposure involves encouraging the patient to revisit the experience in imagination, recalling the experience through verbally describing the emotional details of the trauma. In vivo exposure involves asking the patient to physically confront realistically safe but still feared stimuli (e.g. driving a car after having been in a serious motor vehicle accident). This exposure can also be arranged in a hierarchical fashion. In the preceding example the patient might first sit in a car in the passenger seat, and then in the driver's seat, and then start the car, etc. The patient repeats each situation until a reduction in the intensity of emotional and physiological response is achieved, at which point they move on to the next item in their hierarchy.

DISCUSSION

RCTS of ET have demonstrated its efficacy in female victims of sexual and non-sexual assault, motor vehicle accidents, male combat-related trauma, and mixed trauma populations. Findings regarding efficacy in (mostly

Vietnam) combat veterans in VA clinical settings are less consistent and the degree of improvement in PTSD symptoms appears to be less pronounced.

In randomized trials comparing ET with other cognitive behavioral treatments ET has performed as well or better than any cognitive behavioral therapy (CBT) approach. In a comprehensive review of research studies examining CBT for PTSD Rothbaum et al. (2000) found the strongest evidence for exposure therapy. Four studies have found that exposure treatment for PTSD in samples heterogeneous with regard to their traumas has been efficacious. Richards et al. (1994) found that participants with PTSD who were given either four sessions of imaginal exposure followed by four sessions of in vivo exposure, or in vivo followed by imaginal exposure, improved considerably. Marks et al. (1998) found that exposure, cognitive therapy, and their combination were all equally successful in reducing PTSD at posttreatment and 6-month follow-up. Tarrier et al. (1999) found there was a significant improvement on all measures at posttreatment and follow-up, with no significant differences between exposure therapy and cognitive therapy. Thompson et al. (1995) found that 8 weekly sessions of imaginal and in vivo exposure were effective in treating participants with PTSD.

Vietnam combat veterans (uncontrolled study; 15 males) showed significant improvements from pre- to posttreatment on some measures but not on others, when given a comprehensive treatment package consisting of education, individual ET, programmed practice of the exposure, and social and emotional rehabilitation (Frueh et al., 1996, Keane et al., 1989). A large-scale, randomized controlled effectiveness trial was recently completed involving 360 Vietnam combat veterans (reference). This study compared exposure-based CBT with supportive "present-centered" group therapy that did not involve exposure. Results showed that (a) both treatment conditions produced moderate changes in PTSD symptoms from baseline levels and (b) the two treatment conditions were not different from one another in clinical effectiveness. Rates of drop out from treatment were somewhat higher for the ETgroup.

The Expert Consensus Panel for Post-traumatic Stress Disorder (1999) recommended ET for the treatment of intrusive thoughts, flashbacks, trauma related fears, panic attacks, avoidance and generalized anxiety in patients with PTSD, listing it as the quickest acting psychotherapy and one of the two most effective psychotherapies for PTSD. The International Society for Traumatic Stress Studies described ET as "quite effective" in the treatment of a mixed variety of trauma survivors: "In fact, no other treatment modality has evidence this strong indicating its efficacy."

In most treatment settings, ET is delivered as part of a more comprehensive "package" treatment. That is, it is usually combined with PTSD education, coping skills training, and especially, cognitive restructuring. ET and cognitive restructuring are usually regarded as the most powerful components of treatment, although randomized trials comparing ET alone with combined ET and cognitive restructuring suggest that ET alone may be more effective than combined treatment.

There have, as yet, been no randomized trials comparing ET with pharmacotherapy. Therefore, it is not known how ET compares with SSRIs or other medications as effective treatments. Nor is it known whether combined ET plus pharmacotherapy is more effective than either treatment alone.

Patients need to be screened for their suitability prior to undergoing ET as it may temporarily increase their level of distress. Patients living in dangerous circumstances (e.g., domestic violence or a threatening environment) are not candidates for ET until their security can be assured. Other contraindications for ET have not been confirmed in empirical research, but may include health problems that preclude exposure to intense physiological arousal, current suicidal ideation, substance abuse not in stable remission, co-morbid psychosis, or lack of motivation to undergo the treatment. Because this treatment may increase distress and PTSD symptoms in the short term, it is not well accepted by all patients, some of whom may drop out of treatment. Therefore, providers must take concrete steps to prepare patients for the treatment (e.g., present clear rationale, explore patient concerns, encourage realistic expectations, and build commitment to the therapy) in order to reduce the risk of dropout.

EVIDENCE

	Evidence	Sources	QE	Overall	R

				Quality	
1	ET is effective in the treatment of PTSD (compared to placebo or waiting list).	Cooper et al., 1989 Foa et al., 1991 & 1999a Ironson et al., 2002 Keane et al., 1989 Marks et al., 1998 Tarrier et al., 1999	I	Good	A
2	ET compared to other forms of therapy show equivalent results.	Foa et al., 1991 & 1999a Marks et al., 1998 Paunovic & Ost, 2001 Resick & Nishith, 2001 Schnurr, 2001 Tarrier et al., 1999	I	Good	A

QE = Quality of Evidence; R = Recommendation (see Appendix A)

D. Stress Inoculation Training (SIT)

BACKGROUND

Stress inoculation training (SIT) is a type of CBT that can be thought of as a tool box or set of skills for managing anxiety and stress (Hembree & Foa, 2000). This treatment was developed for the management of anxiety symptoms and adapted for treating women rape trauma survivors. SIT typically consists of education and training of coping skills, including deep muscle relaxation training, breathing control, assertiveness, role playing, covert modeling, thought stopping, positive thinking and self-talk. The rationale for this treatment is that trauma related anxiety can generalize to many situations (Rothbaum et al., 2000). The Expert Consensus Guideline Series: Treatment of Post-traumatic Stress Disorder notes that anxiety management is among the most useful psychotherapeutic treatments for patients (Foa et al., 1999b).

DISCUSSION

There have been two RCTs that have evaluated SIT and both studies found SIT to be effective with women who have survived sexual assault. A study by Foa and colleagues (1991) with 45 female sexual assault victims compared SIT, Prolonged Exposure (PE), Supportive Counseling (SC) and wait list control. SIT was found to be the most effective treatment for short term symptom improvement and both SIT and PE were effective for long term improvement with PE superior to SIT. Rothbaum (2001) reports, "results suggested that all conditions produced improvement on all measures immediately posttreatment and at follow-up. At follow-up, clients who received PE continued to improve after treatment termination, whereas clients in the SIT and SC conditions evidenced no change between posttreatment and follow-up." Another study with 96 female sexual assault victims compared SIT, PE, combined SIT and PE, and wait list controls (Foa et al., 1999a). The study found all treatments were better than wait list control for ameliorating PTSD severity at posttreatment and at 6-month follow-up. Interestingly, although all three treatments were effective, the combined treatment was not superior to either SIT or PE alone, which may be related to the fact that clients in the combined treatment group actually received less PE and SIT training than participants in the individual treatments as treatment sessions were all equal in length.

A study of 15 women by Kilpatrick et al. (1982) found SIT to be effective in reducing rape related fear and anxiety.

Motor vehicle accident survivors (Hickling & Blanchard, 1997) had a 68 percent reduction of PTSD symptoms after involvement in a modified version of Foa et al.'s SIT/PE combination program.

SIT is designed to "inoculate" people with PTSD from heightened stress responses through teaching anxiety management skills which can include:

- Relaxation training: teaching patients to control fear and anxiety through the systematic relaxation of the major muscle groups.

- Breathing retraining: teaching slow, abdominal breathing to help the patient relax and/or avoid hyperventilation with its unpleasant and often frightening physical sensations.

A controlled study comparing three different forms of relaxation (relaxation, relaxation plus deep breathing, and relaxation plus deep breathing plus biofeedback) for 90 Vietnam veterans found that all treatments were equally, but only mildly, effective in leading to improvement (Watson et al., 1997).

- Positive thinking and self-talk: Teaching the person how to replace negative thoughts (e.g., 'I'm going to lose control') with positive thoughts (e.g., 'I did it before and I can do it again') when anticipating or confronting stressors.
- Assertiveness training: teaching the person how to express wishes, opinions, and emotions appropriately and without alienating others.
- Thought stopping: distraction techniques to overcome distressing thoughts by inwardly 'shouting stop (Foa et al., 1999b).

EVIDENCE

	Evidence	Sources	QE	Overall Quality	R
1	SIT is effective as a treatment for PTSD related to sexual assault.	Foa et al., 1999a Foa et al., 1991 Kilpatrick et al, 1982 Rothbaum, 2000	I	Good	A

QE = Quality of Evidence; R = Recommendation (see Appendix A)

E. Eye Movement Desensitization and Reprocessing (EMDR)

BACKGROUND

EMDR is a psychotherapy treatment that was originally designed to alleviate the distress associated with traumatic memories (Shapiro, 1989a; 1989b). The developer of EMDR, psychologist Dr. Francine Shapiro, proposes the idea that EMDR facilitates the accessing and processing of traumatic memories to bring these to an adaptive resolution (Shapiro, 2001). The possibility of obtaining significant clinical improvements in PTSD in a few sessions presents this treatment method as an attractive modality worthy of consideration.

During EMDR, the patient is asked to identify: (1) a disturbing image that encapsulates the worst part of the traumatic event; (2) associated body sensations; (3) a negative self-referring cognition (in concise words) that expresses what the patient "learned" from the trauma; (4) a positive self-referring cognition that the patient wishes could replace the negative cognition. The patient is then asked to hold the disturbing image, sensations, and the negative cognition in mind while tracking the clinician's moving finger back and forth in front of his or her visual field for about 20 seconds. In successive tracking episodes, the patient concentrates on whatever changes or new associations have occurred. Tracking episodes are repeated according to the protocol until the patient has no further changes. More tracking episodes then reinforce the positive cognition.

Between sessions, the patient is directed to keep a journal of any situations that provoke PTSD symptoms and of any insights or dreams about the trauma. The sessions required may be as few as two for uncomplicated PTSD. More sessions are required for multiple or more complicated trauma.

Standard CBT rating scales are used throughout the sessions to document changes in the intensity of the symptoms and the negative cognition, and the patient's belief in the positive cognition. The patient only needs to tell the therapist the concise negative and positive cognitions and whether (and what) cognition, image, emotion, or body sensation has changed. The therapist is close to the patient and maintains direct eye contact as part of the protocol. This fosters a non-directive interaction that usually detects adverse reactions, which the therapist helps the patient manage with cognitive techniques. EMDR processing is internal to the patient, who does not have to reveal the traumatic event.

The protocol allows for substitution of left-right alternating tone or touch as alternatives in place of the eye movements. Studies attempting to ascertain the relative contribution of the eye-movement component have suggested comparable treatment results with or without eye movements, indicating that this aspect of the treatment protocol may not be critical to effectiveness.

DISCUSSION

EMDR was deemed to be an efficacious treatment for PTSD following a critical review of the literature in the treatment guidelines generated by a task force for the International Society for Traumatic Stress Studies (Chemtob et al., 2000), as well as by Division 12 of the American Psychological Association. The United Kingdom Department of Health deemed EMDR efficacious in 2001. While the results of seven controlled published studies found large effect sizes for EMDR, EMDR as a treatment modality has been somewhat controversial in terms of the purported relative speed and efficiency of EMDR compared to other techniques. EMDR has also been touted as being more easily tolerated by patients who have difficulties engaging in prolonged exposure therapy.

Results of four independent reviews that involved 16 controlled trails were assessed by the guideline development panel. Overall, the findings indicated that EMDR represented an effective treatment compared to no treatment or delayed treatment conditions. When compared to other treatment modalities, most studies reviewed indicated that EMDR was as effective as other more traditional therapy approaches including relaxation training based treatments, exposure therapies, cognitive behavioral therapy, hypnotherapy, and psychodynamic therapy.

The review by Davidson (2001) allowed the comparison of EMDR against seven other conditions including no treatment, cognitive behavioral therapy, exposure approaches not involving in vivo re-exposure, a number of dismantling studies looking at variants of EMDR, and other "nonspecific" treatments. Patient groups assessed within the included studies involved both PTSD and other conditions. Overall, EMDR was found to be more effective than no treatment and generally was comparable in effect to the other active treatment conditions. Dismantling studies indicated comparable effectiveness across variant presentations of EMDR.

Maxfield and Hyer (2002) conducted a meta-analysis involving comparisons of EMDR against wait list controls, cognitive behavior therapy involving exposure, and treatment modalities described as other than CBT. Results indicated superiority of EMDR to the wait list control condition. Also, the authors found an overall superiority of EMDR compared to the other active treatment conditions, though they noted sufficient variability that they judged the summed results to indicate comparable vs. superior effectiveness of EMDR over other treatments.

Three studies specifically compared EMDR with CBT (Lee et al., 2002; Power et al., 2002; and Taylor et al., 2002). Lee et al. (2002) and Power et al. (2002) found that EMDR had equivalent or better results than CBT and was more efficient in that it worked faster. Taylor et al. (2002) found otherwise but used therapist-assisted *in vivo* work plus imaginal work. All three studies also gave an hour of daily homework in the exposure condition only, thus greatly increasing the total amount of therapeutic treatment time. Only the Ironson et al. study (2002) that equalized homework did the EMDR group have a faster response to treatment.

The Shephard et al. (2000) meta-analysis involved the use of studies that used patients meeting varying diagnostic criteria of PTSD (i.e., DSM-III, DSM-III-R, and DSM-IV) along with patients who failed to fully meet the diagnostic criteria. EMDR was compared to a broad variety of other treatment conditions including behavioral treatment, cognitive behavioral therapy, antidepressants, relaxation based training, anxiety reduction techniques, exposure based treatments, and variants of EMDR itself. The results indicated that EMDR was an effective treatment. Comparisons between active treatment conditions were less clear with EMDR being found to be as effective as other treatments in some studies and to be less effective than other treatments in a few studies. However, taken on the whole the results were interpreted to indicate generally comparable effectiveness.

Foa and colleagues (1997) conducted a meta-analytic review of studies that involved subjects with PTSD and victims of highly stressful events. EMDR was compared to multiple therapies across the set of studies including hypnotherapy, psychodynamic psychotherapy, CBT, and a variety of no treatment and waiting list control conditions. The authors found several studies that indicated no difference between EMDR and various control conditions. The authors cite a contrary finding in one study suggesting that EMDR was superior to the control condition. The overall conclusions of the authors suggested a more guarded outlook on EMDR as an effective treatment with the bulk of their findings suggesting that EMDR was not effective. Methodological problems in the reviewed studies resulted in a call for further study at the time the review was written.

In two recent "Point" "Counterpoint" reviews of EMDR, (Cahill, 2000; Servan-Schreiber, 2000) two psychiatrists with experience in the area of PTSD treatment debate the merits of EMDR. Servan-Schrieber (2000) reviewed the existing literature on EMDR and concluded that "only the combination of imaginal exposure and *in vivo* exposure has approached [the] degree of effectiveness shown by EMDR." He further argues that the mechanism of eye movement contributes an additional level of therapeutic effect beyond that of simple exposure. Servan-Schrieber cites a meta-analysis published in 1998 by Van Etten and Taylor that "identified more controlled studies of EMDR in PTSD than any other psychotherapeutic treatment modality. Van Etten and Taylor also found EMDR to be the most rapidly effective and best tolerated of all the treatments reviewed, including pharmacotherapy and behavior therapy." In his "Counterpoint" review, Cahill (2000) reviews the same general set of studies but concludes that because of methodological deficiencies in the studies, EMDR cannot be regarded as superior to CBT or other forms of exposure therapy. He does not believe that EMDR operates in a unique or different way from other forms of exposure or cognitive therapy.

Support for the unique property of therapeutic eye movement is provided by a set of seven studies recommended by a member of the Expert Group (Andrade et al., 1997; Barrowcliff et al., in press; Christman and Garvey, 2000; Kavanaugh et al., 2001; Kuiken et al., 2001-2002; Sharpley et al., 1996; and van den Hout et al., 2001). These studies attempt to resolve the issue of the unique role of eye movements, and they demonstrate the effectiveness of eye movements on the desensitization and retrieval of memories.

There may be some basis for or against recommending this treatment depending upon the trauma basis of the PTSD. Specifically, studies of EMDR efficacy with combat veterans have demonstrated considerable variability, with a number of authors suggesting that the treatment may be less than optimal for this condition (Boudewyns et al., 1993; Jensen, 1994). However, other studies that are more recent have suggested the opposite (Carlson et al., 1998; Devilly et al., 1998). It should be noted that only two of the cited studies had a full course of treatment – all the others were short duration studies, unlike the ET combat studies that offered ten or more sessions on all memories. Thus it is impossible to base a conclusion about the use of EMDR for combat trauma on these studies.

This variability in findings and associated evaluations of efficacy appears to be less evident in studies involving groups with different sources of trauma (e.g., sexual assault). Foa et al. (1995) note that exposure therapy may not be appropriate for use with clients whose primary symptoms include guilt, anger, or shame. Given the clinical reality of multiply-traumatized combat veterans' PTSD, this would be a major limitation on the applicability of ET and exposure-based CBT. Finally, the originators of the method have cautioned against the use of this technique with individuals having a past history of some type of dissociative disorder.

Overall, argument can reasonably be made that there are sufficient controlled studies that have sufficient methodological integrity to judge EMDR as effective treatment for PTSD.

EVIDENCE

	Recommendation	Sources	QE	Overall Quality	R
1	EMDR is more efficacious for PTSD than wait-list, routine care, and active treatment controls.	Chemtob et al., 2000 Davidson & Parker, 2001 Foa & Meadows, 1997 Maxfield & Hyer, 2002 Sheppard et al., 2000	I	Good	A

2	Eye movements are *not* critical to the effects of EMDR.	Foa & Meadows, 1997	I	Poor	C
3.	EMDR compared with ET and CT show mixed results.	Cahill, 2000 Davidson & Parker, 2001 Foa & Meadows, 1997 Ironson et al., 2002 Lee et al., 2002 Power et al., 2002 Servan-Schrieber, 2000 Sheppard et al., 2000 Taylor et al., 2002 Van Etten and Taylor, 1998	I	Fair	B

QE = Quality of Evidence; R = Recommendation (see Appendix A)

F. Imagery Rehearsal Therapy (IRT)

BACKGROUND

Occurrence of nightmare as a problem is frequent; 4 to 8 percent in the general population and 60 percent in PTSD. Evidence shows that nightmares are associated with psychological distress and sleep impairment. A conditioning pattern similar to classic psychophysiological insomnia is produced in the nightmare disturbed loop, along with the negative cognition of "fear of going to sleep." Studies using brief CBT (desensitization and imagery rehearsal) have demonstrated large reduction in nightmares. Many studies, including Forbes et al. (2001), suggest that PTSD is associated with a propensity toward image, particularly where the post-traumatic symptom picture is characterized by nightmares and flashbacks. IRT incorporates a system to increase the imagery control.

IRT is aimed at changing the content of the patient's nightmare to promote mastery over the content-threat, thereby altering the meaning, importance, and orientation to the nightmare. The key to successful treatment is the use of imagery. IRT focuses on the following main approaches:

- Deemphasizes exposure by avoiding discussion of trauma or traumatic content of nightmares
- Focuses on habitual components of disturbing dreams and sleeplessness
- Provides no group psychotherapy
- Offers minimal instruction for dealing with unpleasant imagery
- Emphasizes relaxation
- Conveys no specific non-sleep-related instructions for managing post-traumatic stress, anxiety, or depressive symptoms

DISCUSSION

Krakow and colleagues have conducted a number of studies involving IRT and PTSD, to include the following:

Krakow et al., (2001a) studied crime victims with nightmares, insomnia, and PTSD, who averaged thirteen years of chronicity. They demonstrated moderate to large improvement in their symptoms and psychiatric distress after receiving cognitive therapy treatment approaches. The authors found that targeted treatment of sleep problems was associated with improvement in distress.

Over 4 years (1995-1999) 168 women in New Mexico were studied; 95 percent had moderate-to-severe PTSD, 97 percent had experienced rape or other sexual assault, 77 percent reported life-threatening sexual assault, and 58 percent reported repeated exposure to sexual abuse in childhood or adolescence. Participants were randomized to receive treatment (n = 88) or to the wait-list control group (n = 80). Outcome measures included questionnaires that rated sleep quality, frequency of nightmares, and severity of PTSD symptoms at 3- and 6-month follow-up. A total of 114 participants completed follow-up at 3 and/or 6 months. Comparing baseline to follow-up, treatment significantly reduced nights per week with nightmares and number of nightmares per week and improved sleep and PTSD symptoms. Control participants showed small, nonsignificant improvements for the same measures. An intent-to-treat analysis (n = 168) confirmed significant differences between treatment and control groups for nightmares, sleep, and PTSD with moderate effect sizes for treatment and small effect

sizes for controls. The authors concluded that IRT is a brief, well-tolerated treatment that appears to decrease chronic nightmares, improve sleep quality, and decrease PTSD symptom severity.

DSM-IV-TR suggests that nightmares occurring with another psychiatric disorder are not a distinctly treatable condition and its remission occurs only through treatment of the primary disorder, such as anxiety disorder, and PTSD.

Krakow et al. (1995) studied 58 chronic nightmare sufferers who were randomly assigned to a treatment group (n = 39) or a wait-list control group (n = 19). Subjects in the treatment group were taught imagery rehearsal. The subjects were assessed pre-treatment and at 3 months follow-up for nightmare frequency, self-rated distress and subjective sleep quality. Compared to the control group, the treatment group showed significant and clinically meaningful decreases in nightmares. Significant improvement in self-rated sleep quality occurred in those treated compared with controls (P = 0.004); and, reduction in nightmares was a significant predictor of improvement in sleep (r = 0.55, P = 0.0001). The authors concluded that, for some chronic sufferers, nightmares may be conceptualized as a primary sleep disorder which can be effectively and inexpensively treated with CBT.

Krakow and colleagues (2001b) studied IRT for the treatment of chronic nightmares in a sample of adolescent girls (treatment group: n = 9; control group: n = 10). These girls had previously suffered a high prevalence of unwanted sexual experiences in childhood and adolescence, and thus many suffered from nightmares, sleep complaints, and post-traumatic stress symptoms. IRT was provided in a 1-day (6-h) workshop. Imagery rehearsal consisted of three steps, all of which are performed in the waking state: (a) select a nightmare, (b) "change the nightmare any way you wish," and (c) rehearse the images of the new version ("new dream") 5 to 20 min each day. The control group participants received no intervention. At baseline, these girls had been suffering from nightmares, on average, for 4.5 years, and they reported experiencing 20 nightmares per month, which occurred at a frequency of at least one bad dream every other night. At 3 months, self-reported, retrospectively assessed nightmare frequency measured in nights per month decreased 57 percent (p =.01, d = 1.4) and measured in nightmares per month decreased 71 percent (p =.01, d = 1.7) in the treatment group, compared with no significant changes in the control group. No significant changes were noted for sleep and PTSD measures in either group. The authors concluded that IRT was an effective treatment option for chronic nightmares in this adjudicated adolescent population.

Forbes et al. (2001) did a follow-up study to asses the efficacy of imagery rehearsal in reducing the frequency and intensity of targeted combat-related nightmares in a group of Vietnam veterans with PTSD. Veterans were specifically instructed to write down their nightmare and subsequently read it aloud to the group. Three treatment groups, comprising 4 veterans in each, completed standardized treatment across 6 sessions. Treatment effects were investigated using nightmare diaries and established instruments. The data demonstrate significant reductions in nightmares targeted, and improvements in PTSD and comorbid symptomatology. The authors recommended that, on the basis of the promising preliminary data, a RCT be established to assess imagery ability and attitude toward nightmares.

EVIDENCE

	Recommendation	Sources	QE	Overall Quality	R
1	IRT be considered for treatment of PTSD (nightmare and sleep disruption in particular).	Krakow et al., 1995; 2001a; 2001b Forbes et al, 2001	I	Fair	B

QE = Quality of Evidence; R = Recommendation (see Appendix A)

G. Psychodynamic Therapy

BACKGROUND

In 1895, Joseph Breuer and Sigmund Freud based their *Studies on Hysteria* on the proposition that traumatic life events can cause mental disorder (Breuer & Freud, 1955). This principle, radical for its time, grew in scope and

application over the next century and strongly influenced military psychiatry in World War I (Kardiner, 1941; Rivers, 1918) and World War II (Grinker & Spiegel, 1945). Psychodynamic principles were later applied to the psychological problems of Holocaust survivors (Krystal, 1968; De Wind, 1984), Vietnam veterans (Lindy, 1996), rape survivors (Rose, 1991), adult survivors of childhood sexual trauma (Courtois, 1999; Roth & Batson, 1997; Shengold, 1989), and survivors of other traumatic events (Horowitz, 1997). Psychodynamic ideas have also helped providers manage the sometimes complex issues that may surface in the relationship between survivor and psychotherapist (Pearlman & Saakvitne, 1995; Wilson & Lindy, 1994). The following statements summarize the basic elements of psychodynamic psychotherapy:

- Based on the assumption that addressing unconscious mental contents and conflicts (including those that may have been blocked from consciousness as part of a maladaptive response) can help survivors better cope with the effects of psychological trauma
- Explores psychological meanings of post-traumatic responses by sifting and sorting through fears, fantasies, and defenses stirred up by the traumatic event
- Spans a continuum ranging from supportive to expressive but usually includes a mixture of both
- Transference and countertransference are recognized and managed by the therapist but may or may not be brought to the patient's attention
- Approached within the context of a therapeutic relationship that emphasizes safety and honesty and which is, in itself, a crucial factor in the patient's response

Course of Treatment for psychodynamic therapy:

- Most commonly involves one to two meetings per week and can be relatively short term (10 to 20 sessions) and focal or long term (lasting years) and open ended
- Sessions usually last 45 to 50 minutes and, although they average once a week, may be held more or less frequently depending on the patient's needs and tolerance
- Can be conducted individually, in groups, or in family settings on an inpatient or outpatient basis

DISCUSSION

Individual case reports comprise the bulk of the psychodynamic literature on the treatment of psychological trauma, but a small group of empirical investigations and case series with controlled variables and validated outcome measures are available to support recommending psychodynamic therapy as a treatment option for PTSD.

Controlled investigations of the efficacy of psychodynamic therapies are few. Individual case reports comprise the bulk of the psychodynamic literature on the treatment of psychological trauma, but a small group of empirical investigations and case series with controlled variables and validated outcome measures support recommending psychodynamic therapy as a treatment option for PTSD

Brom and colleagues (1989) conducted a RCT that compared psychodynamic psychotherapy to hypnotherapy, trauma desensitization, and a wait list control group in the treatment of patients with PTSD. They found that symptoms of intrusion and avoidance improved significantly in each of the treatment groups but not in the control group. Psychodynamic psychotherapy was more effective than the other treatments in terms of improved coping ability and greater self-esteem. Subjects in the psychodynamic psychotherapy group showed more improvement in the post-termination phase than did subjects in the other two treatment groups. Participants in all three treatment conditions were more improved than those in the wait-list condition (10 percent improvement), but no differences across the three treatments were observed, with 29 percent improvement for those in psychodynamic therapy, 34 percent for hypnotherapy, and 41 percent for desensitization (Rothbaum, 2001).

While research evidence and clinical experience suggest that psychodynamic psychotherapy can be effectively combined with other forms of psychotherapy and with psychopharmacological interventions for depression (DiMascio et al., 1979; van Praag, 1989), this approach has not been sufficiently researched in work with PTSD.

Psychodynamic ideas have, in some instances, been misapplied in clinical work with trauma survivors giving rise to concern about the creation or elaboration of so-called *false memories* (Roth & Friedman, 1997). It may be that trauma survivors are particularly prone to this phenomenon given their tendency towards dissociation. It is important that clinicians be properly trained before undertaking psychodynamic treatment of trauma survivors.

Because of its focus on basic problems in interpersonal relationships, psychodynamic psychotherapy may be useful in working with patients with complex PTSD. Clinical case studies suggest that psychodynamic psychotherapy may be of particular value in work with adult survivors of childhood sexual abuse (Courtois, 1999; Roth & Batson, 1997; Shengold, 1989). Psychodynamic psychotherapy may also be useful in treating patients suffering complex PTSD stemming from other stressors but there is, as yet, little research evidence to support this recommendation.

EVIDENCE

	Recommnedation	Sources	QE	Overall Quality	R
1	Psychodynamic psychotherapy for the treatment of PTSD.	Brom et al., 1989	I	Good	B
2	Psychodynamic psychotherapy for patients with complex PTSD.	Courtois, 1999 Roth & Batson, 1997 Shengold, 1989	II-2	Fair	B

QE = Quality of Evidence; R = Recommendation (see Appendix A)

H. Patient Education

OBJECTIVE

Provide a therapeutic intervention that reduces the symptoms and functional impairments of PTSD.

BACKGROUND

Psychoeducation is a broad term that is often included as a component of other treatment interventions. The expert consensus guidelines on PTSD describe psychoeducation as educating patients and their families about the symptoms of PTSD and the various treatments that are available. They note that it is a useful adjunct therapy for patients with PTSD. In addition to education, reassurance is given that trauma related symptoms are normal and expectable shortly after a trauma and can often be overcome with time and treatment. Education about the symptoms and treatment of comorbid disorders may also be included. Psychoeducational group treatment models for PTSD treatment have been described for women with multiple traumas as well as combat veterans (Foa et al., 1999; Lubin et al., 1998).

DISCUSSION

Psychoeducation is regarded as a useful therapy by many clinicians, although it has not been the subject of any organized review, or well designed RCTs. There is one published efficacy trial of a psychoeducational group therapy for women who survived multiple traumas. Twenty-nine women were treated in a 16-week, trauma-focused inter-active psychoeducational group. The groups met for a brief psychoeducational lecture (15 minutes), followed by an interactive discussion with the therapist. However, there were cognitive behavioral components of the treatment. The cohort was all women, mean age 41, mean years since last trauma was 14, there were many comorbid disorders, over 80 percent were in ongoing individual therapy, and nearly 80 percent were taking psychotropics. The subjects demonstrated significant reductions in their PTSD symptoms on all subscales of the Clinician Administered PTSD Scale (CAPS), with a 50 percent reduction in symptoms from baseline. The recommendations for patient education are consistent with the clinical expert consensus guidelines (Foa et al., 1999).

EVIDENCE

	Recommendation	Sources	QE	Overall Quality	R
1	Psychoeducation is recommended.	Foa et al., 1999 Lubin et al 1998	III II-2	Poor Fair	C B

QE = Quality of Evidence: R = Recommendation (see Appendix A)

I. Group Therapy

OBJECTIVE

Provide a supportive environment in which a patient with PTSD may participate in therapy with other PTSD patients.

BACKGROUND

The material in this annotation is taken primarily from David Foy and colleagues' discussion of Group Therapy in the recent practice guideline, Effective Treatment for PTSD (Foy et al., 2000). This guideline represents the most recent and most comprehensive review of current treatments for PTSD available in the literature. Only one descriptive study of a group therapy program (Donovan et al., 2001) is more recent than the guideline.

The authors briefly review the use of group therapy for PTSD. They note that it first began to be used as a "front-line treatment" for PTSD in the 1970's, and that it has continued to be used, and researched, up to the present. They note the intuitive appeal of providing this form of therapy to patients who, by the nature of their disorder, have to deal with "isolation, alienation, and diminished feelings" (Foy et al., 2000). They further acknowledge the possibility that group therapy may foster "survivor helping survivor" feelings in participants.

Foy et al. (2000) characterize group approaches as "supportive," "psychodynamic," or "cognitive-behavioral." While all three approaches share certain features such as homogeneous groups, acknowledgement of the trauma, and normalization of traumatic response, they also differ in significant ways:

Supportive approach

- "Covering" approach in which the emphasis is placed on addressing current life issues
- Interventions explore middle-range affects such as frustration, with the goal of diffusing more extreme affects
- Less reliance on formal content or structured materials than psychodynamic or cognitive-behavioral groups
- Low demand on clients for homework or mastery of materials
- Designed to maintain a sense of interpersonal comfort and to keep transference at a low to moderate level
- Orients members toward current coping
- Can be conducted in a range of clinical and paraclinical settings

Psychodynamic ("Trauma focus") approach

- "Uncovering" approach designed to address members' specific traumatic experiences and memories
- Helps patients find meaning in the traumatic experience
- Encourages patients to confront the continuing issues presented by the experience
- Allows patients to trace painful affects back to their self-views and views of others, which may be irrational
- Seeks to provide appropriate affective involvement, monitored to control any overwhelming feelings and to offset the risk for precipitating dissociative reactions

Cognitive-behavioral ("Trauma focus") approach

- "Uncovering" approach designed to address members' specific traumatic experiences and memories
- Primary goals are to reduce symptoms, enhance members' self-control, and improve quality of life
- Emphasizes application of systematic, prolonged exposure and cognitive restructuring to each individual's traumatic experience
- Provides relapse prevention training through emphasis on mobilizing coping resources
- May feature an autobiographical emphasis
- Incorporates trauma processing

RECOMMENDATIONS

1. Consider group treatment for patients with PTSD
2. Current findings do not favor any particular type of group therapy over other types.

DISCUSSION

Foy et al. (2000) note that although group therapy is in common use for PTSD patients, very little research has been done to validate the effectiveness of group therapy, or to delineate those characteristics of therapy that lead to improved clinical outcomes. Their review is based on two RCTs, five nonrandomized trials, and seven pre-/post-treatment single-group studies. In light of the small number of studies, they recommend that group therapy be seen as potentially effective.

The guideline authors provide a useful guide to selecting candidates for group therapy:

Indications for Group Therapy (from Foy et al., 2000)

- Flexibility in personal schedule in order to meet group at appointed times
- Able to establish interpersonal trust with other group members and leaders
- Prior group experience, including 12-step groups
- Completion of a preparatory course of individual therapy
- Not actively suicidal or homicidal
- Shares similar traumatic experiences with other group members
- Compatible for gender, ethnicity, and sexual orientation with other members
- Willing to abide by rules of group confidentiality
- Not severely paranoid or sociopathic
- Has stable living arrangements

Contraindications for Group Therapy (from Foy et al., 2000)

- Active psychosis
- Severe organicity or limited cognitive capacity
- Pending litigation or compensation seeking

Indications for Trauma Focus versus Supportive Groups (from Foy et al., 2000)

- Individual can tolerate high anxiety arousal or other strong affects
- No active suicidality or homicidality
- Substance abuse or other comorbidities are under control
- Individual accepts rationale for trauma uncovering work
- Willingness to self-disclose personal traumatic experiences
- No current life crises

Two recent studies not included in the Effective Treatments for PTSD guideline provide a small amount of additional evidence for the effectiveness of group therapy. In the Rogers et al. (1999) study, 12 Vietnam War veterans were randomly assigned to either a single group session of exposure, or a single group session of eye movement desensitization and reprocessing (EMDR). In this study, at follow-up both groups "showed

improvement on the Impact of Event Scale." The EMDR group experienced "greater positive changes in within-session Subjective Units of Discomfort levels and on self-monitored severity of intrusive recollection."

Donovan et al. (2001) present a descriptive study of a treatment approach that, "defined by a detailed manual, integrates elements of cognitive-behavioral skills training, constructivist theory approaches, SA relapse prevention strategies, and peer social support into a group-focused program." They review outcome data for 46 male patients who received treatment between 1996 and 1998. The authors found that at six- and twelve-month follow-up, patients experienced significant improvement in Clinician-Administered PTSD Scale and Addiction Severity Index scores.

EVIDENCE

	Recommendation	Sources	QE	Overall Quality	R
1	Consider group treatment for patients with PTSD	Donovan et al., 2001 Foy et al., 2000 Rogers et al., 1999	III II I	Fair	B
2	Current findings do not favor any particular type of group therapy	Foy et al., 2000	II	Poor	I

QE = Quality of Evidence; R = Recommendation (see Appendix A)

J. Dialectical Behavior Therapy

BACKGROUND

Dialectical behavior therapy (DBT) is a comprehensive cognitive-behavioral treatment for complex, difficult-to-treat mental disorders, specifically designed to treat chronically suicidal individuals, and patients with multi-disordered individuals with borderline personality disorder (BPD).

DBT has since been adapted for other seemingly intractable behavioral disorders involving emotion dysregulation, including substance dependence in individuals with BPD and binge eating, to other clinical populations (e.g., depressed, suicidal adolescents), and to a variety of settings (e.g., inpatient, partial hospitalization, forensic).

While considerable evidence supports the use of exposure-based treatment for PTSD, its utilization may pose some problems for patients where the symptoms of PTSD are complicated. High rates of attrition, suicidality, dissociation, destructive impulsivity, and chaotic life problems are reasons cited by clinicians for abandoning empirically supported exposure treatment. Some practitioners have suggest that the approach of DBT, designed to address many of these issues, offers useful strategies for addressing the needs of patients considered poor candidates for exposure therapy.

The DBT approach incorporates what is valuable from other forms of therapy, and is based on a clear acknowledgement of the value of a strong relationship between therapist and patient. Therapy is structured in stages and at each stage a clear hierarchy of targets is defined. The techniques used in DBT are extensive and varied, addressing essentially every aspect of therapy. These techniques are underpinned by a dialectical philosophy that recommends a balanced, flexible and systemic approach to the work of therapy. Patients are helped to understand their problem behaviors and then deal with situations more effectively. They are taught the necessary skills to enable them to do so and helped to deal with any problems that they may have in applying those skills.. Advice and support is available between sessions. Patient is encouraged and helped to take responsibility for dealing with life's challenges.

DISCUSSION

Although DBT is becoming more common as a technique for treating patients with BPD, no clinical trials have been reported in the literature for the use of DBT in patients with PTSD. The following studies concern patients

with BPD who attempt some form of self-injury; however, for patients with PTSD and comorbid BPD, these studies may be applicable to the treatment decision process.

In a meta-analysis of RCTs of "psychosocial and/or psychopharmacological treatment versus standard or less intensive types of aftercare" for patients who had shown self-harm behaviors, Hawton et al. (2000) compared DBT vs standard after care and found that DBT significantly reduced rates of further self-harm (0.24; 0.06 to 0.93)." The authors caution, however, that "there still remains considerable uncertainty about which forms of psychosocial and physical treatments of self-harm patients are most effective, inclusion of insufficient numbers of patients in trials being the main limiting factor."

van den Bosch et al.(2002) and Verheul et al. (2003) reported on the effectiveness of DBT in a group of 58 female BPD patients. For these women, DBT therapy "resulted in better retention rates and greater reductions of self-mutilating and self-damaging impulsive behaviours compared with usual treatment, especially among those with a history of frequent self-mutilation" (Verheul et al., 2003). In the same study group, van den Bosch et al. (2002) compared the results of therapy in women with and without comorbid substance abuse. They found that comorbid substance abuse did not dilute the effect of the DBT, but that the DBT therapy had no effect on the womens' substance problems. Evans et al. (1999) compared the provision of self-help booklets alone to six sessions of cognitive therapy linked to the booklets, which contained elements of DBT (MACT) in 34 patients who had attempted self-harm. The authors reported that MACT therapy led to a lowering of the number of suicidal acts per month, and also improved self-rated depressive symptoms.

Linehan and colleagues (1993) conducted a RCT of 39 women with BPD, who were randomly assigned to DBT or usual care for one year, then followed-up at six and twelve months following treatment. The authors reported that DBT patients had significantly less parasuicidal behavior, less anger, and better self-reported social adjustment during the initial 6 months and significantly fewer psychiatric inpatient days and better interviewer-rated social adjustment during the final 6 months; overall, DBT subjects had significantly higher Global Assessment Scale scores during the follow-up year.

Telch et al. (2001) and Safer et al. (2001) expanded the DBT concept to treatment of women with binge eating disorder. In both studies, women were randomly assigned to DBT or a wait list (Telch study – 44 women; Safer study – 31 women) and the authors results were similar; patients improved significantly in reduction of binge/purge behaviors, but did not differ on any secondary measures.

Bohus et al. (2000) treated 24 female chronically suicidal patients with DBT and found significant improvements in ratings of depression, dissociation, anxiety and global stress and a highly significant decrease in the number of parasuicidal acts.

Gould et al. (2003) and Miller and Glinski (2000) identify DBT as a promising treatment for suicide, however, they acknowledge the need for RCTs. In their overview of the use of DBT, Koerner and Linehan (2000) also stress the need for longitudinal follow-up studies to determine suicide rates and maintenance of treatment gains.

EVIDENCE

	Recommendation	Sources	QE	Overall Quality	R
1	Consider DBT for patients with a borderline personality disorder typified by parasuicidal behaviors.	Evans et al., 1999 Hawton et al., 2000 Linehan et al., 1993 Safer et al., 2001 Telch et al., 2001 van den Bosch et al., 2002 Verheul et al., 2003	I	Fair	B

QE = Quality of Evidence; R = Recommendation (see Appendix A)

K. Hypnosis

OBJECTIVE

A therapeutic intervention that may be an effective adjunctive procedure in the treatment of PTSD.

BACKGROUND

Hypnosis is not a therapy per se, but an adjunct to psychodynamic, cognitive-behavioral, or other therapies, and has been shown to enhance significantly their efficacy for a variety of clinical conditions (Kirsch et al., 1998; Spiegel & Spiegel, 1987). In the specific context of post-traumatic symptomatology, hypnotic techniques have been used for the psychological treatment of shell shock, battle fatigue, traumatic neuroses, and more recently, PTSD, and dissociative symptomatology.

Hypnosis is defined by the APA as "a procedure during which a health professional or researcher suggests that a client, patient, or subject experience changes in sensations, perceptions, thought, or behavior." The hypnotic context is generally established by an induction procedure (Kirsch, 1994). An induction procedure typically entails instructions to disregard extraneous concerns and focus on the experiences and behaviors that the therapist suggests or that may arise spontaneously.

Hypnosis should only be used by credentialed health care professionals, who are properly trained in the clinical use of hypnosis and are working within the areas of their professional expertise.

DISCUSSION

Most of the case studies that reported that hypnosis was useful in treating posttrauma disturbances following a variety of traumas lack methodological rigor, and therefore strong conclusions about the efficacy of hypnosis to treat PTSD cannot be drawn (Rothbaum, 2001).

Brom and colleagues (1989), in a RCT, showed that hypnosis and desentization significantly decreased intrusion, whereas psychodynamic therapy was useful for reducing avoidance symptoms in patients with various types of post-traumatic symptomatology. A recent meta-analysis of controlled clinical trials (Sherman, 1998) compared the effects of the Brom et al. trial and those of other controlled studies and found that the major advantage of using hypnosis may come at follow-up rather than at the end of treatment; this is consistent with meta-analyses of hypnosis for conditions other than PTSD (Kirsch et al., 1999).

Various meta-analyses of studies on the treatment of anxiety, pain, and other conditions imply that hypnosis can substantially enhance the effectiveness of psychodynamic and CBTs (Kirsch, 1996; Kirsch et al., 1999; Smith et al., 1980). However, most of the literature on the use of hypnosis for PTSD is based on service and case studies.

Hypnotic techniques have been reported to be effective for symptoms often associated with PTSD such as pain (Daly & Wulff, 1987; Jiranek, 1993; Richmond et al., 1996), anxiety (Kirsch et al., 1995) and repetitive nightmares (Eichelman, 1985; Kingsbury, 1993).

There are a number of indications for using hypnosis in the treatment of PTSD (Foa et al., 2000):

1. Hypnotic techniques may be especially valuable for symptoms often associated with PTSD, such as dissociation and nightmares, for which they have been successfully used.
2. PTSD patients who manifest at least moderate hypnotizability may benefit from the addition of hypnotic techniques to their treatment.
3. Because confronting traumatic memories may be very difficult for some PTSD patients, hypnotic techniques may provide them with a means to modulate the emotional and cognitive distance from such memories as they are worked through therapeutically.

There are a number of contraindications for using traditional hypnotic techniques in the treatment of PTSD (Foa et al., 2000):

1. In the rare cases of individuals who are refractory or minimally responsive to suggestions, hypnotic techniques may not be the best choice, beause there is some evidence that hypnotizability is related to treatment outcome efficacy (Levitt, 1994; Spiegel et al., 1981 & 1993).
2. Some PTSD patients may be reluctant to undergo hypnosis, either because of religious belief or other reasons. If the resistance is not cleared after dispelling mistaken assumptions, other suggestive techniques can be tried, including emotional self-regulation therapy (ESRT), which is done with open eyes and uses sensory recall exercises rather than a hypnotic induction (Bayot et al., 1997; Kirsch et al., 1999).
3. For patients who have low blood pressure or are prone to fall asleep, hypnotic procedures such as "alert hand," which emphasize alertness and acitivity rather than relaxation, may be substituted (Cardena et al., 1998).

EVIDENCE

	Recommednation	Sources	QE	Overall Quality	R
1	Hypnosis may be used to alleviate PTSD symptoms.	Brom et al., 1989 Sherman, 1998	I	Fair	B

QE = Quality of Evidence; R = Recommendation (see Appendix A)

L. Psychosocial Adjunctive Methods/Services

OBJECTIVE

Provide a therapeutic intervention that facilitates generalizing skills for coping with PTSD from clinic to home/work/community.

BACKGROUND

Patients with chronic PTSD may develop a persistent incapacitating mental illness marked by severe and intolerable symptoms; marital, social, and vocational disability; and extensive use of psychiatric and community services. These patients may sometimes benefit more from case management and psychosocial rehabilitation than from psycho-or pharmacotherapy.

RECOMMENDATIONS

1. Consider psychosocial rehabilitation techniques once the client and clinician identify the following kind of problems associated with the diagnosis of PTSD: persistent high-risk behaviors, lack of self care/independent living skills, homelessness, interactions with a family that does not understand PTSD, socially inactive, unemployed, and encounters with barriers to various forms of treatment/rehabilitation services.
2. Client and clinician should determine whether such problems are associated with core symptoms of PTSD and, if so, then ensure that rehabilitation techniques are used as a contextual vehicle for alleviating PTSD symptoms.
3. Psychosocial rehabilitation should occur concurrently or shortly after a course of treatment for PTSD, since psychosocial rehabilitation is not trauma-focus.

DISCUSSION

There are seven models of psychosocial rehabilitation services that are currently recommended as an adjunct to accompany other forms of treating PTSD. None of these models have undergone randomized, controlled trials for patients with PTSD. However, all these models have been supported by surveys and studies. Positive results with other disorders (e.g., schizophrenia) provide additional support for using these techniques in the treatment of PTSD.

If psychosocial rehabilitation services are to be implemented, the client first identifies that a particular problem exists, and then the client and clinician set personal goals and adapt appropriate rehabilitation techniques/services for PTSD. When to initiate these techniques is decided by the client and individually

tailored to each stage of recovery (Wang et al., 1996). Psychosocial rehabilitation techniques are contraindicated when client and clinician conclude that the problems are resolved.

Models of Psychosocial Rehabilitation Services

1. Self-Care and Independent Living Skills Techniques
   - While social rehabilitative therapies (i.e., teaching social, coping, and life function skills) have been proven effective in chronic schizophrenic and other persistently impaired psychiatric cohorts, they have yet to be formally tested with PTSD clients. Since they appear to generalize well from clients with one mental disorder to another, it is reasonable to expect that they will also work with PTSD clients. There is clinical consensus that appropriate outcomes would be improvement in self-care, family function, independent living, social skills, and maintenance of employment.
   - Given the positive impact of independent skills training techniques for mental disorders in general (Halford et al., 1995), PTSD-centered modules should be developed and tested for effectiveness.
2. Supported Housing
   - Forms of housing considered more effective are those in which clinical services are integrated or efforts are made by treating staff to foster community living (Goldfinger et al., 1997; Schutt & Garrett, 1992)
   - Existing literature for persons with other forms of mental illness demonstrates that case management linked to specialized clinical services is more effective than "single-room occupancy" or "warehousing" in shelters without other forms of support (Goldfinger et al., 1997).
3. Marital/Family Skills Training
   - Marital and family treatments for trauma survivors fall into one of two general categories: systemic approaches designed to treat marital or family disruption, and supportive approaches designed to help family members offer support for an individual being treated for PTSD. These treatments are usually provided as an adjunct to other forms of treatment that are designed to directly address the PTSD symptoms.
   - A single, low-quality RCT compared the addition of family therapy to individual therapy for war veterans with PTSD (Glynn et al., 1999). It found no significant benefit to the addition of behavioral family therapy (BFT), largely due to a high dropout rate, nor did it add significantly to the treatment of PTSD with direct therapeutic exposure (DTE) (an individual psychotherapy technique).
   - There are no research studies on the effectiveness of marital/family therapy for the treatment of PTSD. However, because of trauma's unique effects on interpersonal relatedness, clinical wisdom indicates that spouses and families be included in treatment of those with PTSD. Of note, marriage counseling is typically contraindicated in cases of domestic violence, until the batterer has been successfully (individually) rehabilitated.
4. Social Skills Training
   - Effectiveness of social skills training has been well demonstrated over many years in many RCTs but not specifically for PTSD (Dilk & Bond, 1996).
   - Effectiveness of social skills training has been demonstrated for reducing social isolation of persons with severe mental disorders (e.g., schizophrenia); similar techniques may be promising for PTSD, particularly if adapted to address antecedent conditions involved in trauma and its consequences (Rothbaum & Foa, 1996).
5. Vocational Rehabilitation
   - Effectiveness of vocational rehabilitation techniques in treating mental disorders has been demonstrated under controlled experimental conditions (Bell & Lysaker, 1996; Bell et al., 1996; Bell et al., 1993; Bond et al., 1997) and controlled, clinical studies (Anthony et al., 1995; Drake, 1996; Lehman, 1995; Lysaker et al., 1993).
6. Case Management

   Although case management has been shown to be useful for a range of other psychiatric disorders, there is currently no evidence available from RCTs or from systematic reviews to support or reject the use of case management for PTSD patients.

- Among populations with histories of trauma, the assertive community treatment models have been empirically validated under controlled (but not with random assignment) conditions (Mueser et al., 1998).
- Most of the research that empirically validates case management has been conducted among persons with severe mental disorders (Mueser et al., 1998), presumably including persons with co-occurring PTSD and other disorders.
- Evidence suggests that outcomes are more favorable for intensive case management (well-trained clinician teaches client psychosocial rehabilitation skills in the client's home/community) than for simple case management (clinician links client to needed services).
- Case management has been demonstrated to reduce inpatient hospitalizations and severe symptoms, as well as to stabilize housing for formerly homeless persons; however, there is little evidence to suggest that case management improves vocational adjustment/social functioning (Mueser et al., 1998).

M. Spiritual Support

OBJECTIVE

Reduce Symptoms of PTSD and improve patient's functioning through social and spiritual support.

BACKGROUND

Spiritual & existential issues: "Given the complex range of PTSD symptomatology, a successful treatment program will address not only the emotional issues that characterize the disorder but also its psychophysiological, cognitive, and interpersonal processes and existential meanings" (Hunter, 1996).

RECOMMENDATIONS

1. Provide access to religious/spiritual resources, if sought.

DISCUSSION

Trauma as Shattered Life Assumptions: Recent research on cognitive processes in victimization indicates that major changes in the individual's basic life assumptions may occur. These assumptions involve the security and meaningfulness of the world and one's sense of self-worth in relation to perception of the environment (Janoff-Bulman, 1979). Specifically, these assumptions are: (1) that one's environment is physically and psychologically safe; (2) that events are predictable, meaningful and fair; (3) that one's own sense of self-worth is positive in relation to experiences with other people and events (Hunter, 1996).

Social system interventions involve community action, organization and mobilization; education and consultation with advice for leaders; mobilization of action plans and recover process; facilitation of adaptation and mastery in social change; development of community networks; development of a positive recover organization; communication; and community theater and art geared to working through and recovering from the trauma.

Providing space and opportunities for prayers, mantras, rites and rituals and end-of-life care as determined important by the patient (Lee, 1997; Canda & Phaobtong, 1992)

EVIDENCE

	Recommendation	Sources	QE	Overall Quality	R
1	Provide opportunities to vent & defuse, to share feelings and talk.	Bogia & Preston, 1985 Everly, 2000 Hunter	II	Fair	C

QE = Quality of Evidence; R = Recommendation (see Appendix A)

VA/DoD CLINICAL PRACTICE GUIDELINE FOR THE MANAGEMENT OF POST-TRAUMATIC STRESS

APPENDICES

APPENDIX A
Guideline Development Process

The development of the VA/DoD Clinical Practice Guideline for the Management of Traumatic Stress Symptoms was initiated in May 2002 and continued through May 2003. The development process followed the steps described in "Guideline for Guidelines" an internal working document of VHA's National Clinical Practice Guideline Council, which requires an ongoing review of the work in progress.

Target Audience

The guideline is designed for providers in primary care clinics and mental health centers, including PTSD special programs and VET centers. Specific modules in this guideline:

- Address prevention and health surveillance that may affect any person in the DoD or VA setting
- Outline the actions of individuals who provide early interventions or consultations in the immediate response to trauma events, mass catastrophic events, or combat situations during ongoing military operations
- Provide recommendations for the treatment of PTSD

Guideline Development Process

The Offices of Quality and Performance and Patient Care Service, in collaboration with the network Clinical Managers, the Deputy Assistant Under Secretary for Health, and the Medical Center Command of the DoD identified clinical leaders to champion the guideline development process. During a preplanning conference call, the clinical leaders defined the scope of the guideline and identified a group of clinical experts from the VA and DoD that formed the Guideline Development Working Group.

The Working Group participated in several face-to-face sessions to reach a consensus about the guideline recommendations and to prepare a draft document. The draft was revised by the experts through numerous conference calls and individual contributions to the document.

The final draft was reviewed mental health and primary care experts in the VA and DoD. Their feedback was integrated into the final draft. Nonetheless, this document is a work in progress. It will be updated every two years, or when significant new evidence is published.

The guideline is the product of many months of diligent effort and consensus building among knowledgeable individuals from the VA, DoD, academia, and guideline facilitators from the private sector. An experienced moderator facilitated the multidisciplinary Working Group. The list of participants is included in the introduction to the guideline.

Formulating of Questions

The Working Group developed eighteen researchable questions and associated key terms after orientation to the seed guidelines and to goals that had been identified by the Working Group. The questions specified (adapted from the Evidence-Based Medicine (EBM) toolbox, Centre for Evidence-Based Medicine, (http://www.cebm.net):

- Population – characteristics of the target patient population
- Intervention – exposure, diagnostic, or prognosis
- Comparison – intervention, exposure, or control used for comparison
- Outcome –outcomes of interest

These specifications served as the preliminary criteria for selecting studies.

Selection of Evidence

Published, peer-reviewed, randomized controlled trials (RCTs) were considered to constitute the strongest level of *evidence* in support of guideline recommendations. This decision was based on the judgment that RCTs provide the clearest, scientifically sound basis for judging comparative efficacy. The Working Group made this decision recognizing the limitations of RCTs, particularly considerations of generalizability with respect to patient selection and treatment quality. Meta-analyses that included random controlled studies were also considered to be the strongest level of evidence, as well as reports of evidence-based systematic reviews.

A systematic search of the literature was conducted. It focused on the best available evidence to address each key question and ensured maximum coverage of studies at the top of the hierarchy of study types: evidence-based guidelines, meta-analyses, and systematic reviews. When available, the search sought out critical appraisals already performed by others that described explicit criteria for deciding what evidence was selected and how it was determined to be valid. The sources that have already undergone rigorous critical appraisal include Cochrane Reviews, Best Evidence, Technology Assessment, and EPC reports.

The search continued using well-known and widely available databases that were appropriate for the clinical subject. In addition to Medline/PubMed, the following databases were searched: Database of Abstracts of Reviews of Effectiveness (DARE) and Cochrane Central Register of Controlled Trials (CCTR). For Medline/PubMed, limits were set for language (English), date of publication (1998 through July 2002) and type of research (RCT and meta-analysis). For most of the pharmacotherapy topics the only limit was date, 1990 through March 2003).

Once definitive reviews or clinical studies that provided valid relevant answers to the question were identified, the search ended. The search was extended to studies/reports of lower quality (observational studies) only if there were no high quality studies.

Exclusion criteria included reviews that omitted clinical course or treatment. Some retrieved studies were rejected on the basis of published abstracts, and a few were rejected after the researchers scanned the retrieved citation for inclusion criteria. Typical exclusions included studies involving children and adolescents.

The results of the search were organized and reported using reference manager software. At this point, additional exclusion criteria were applied. The bibliographies of the retrieved articles were hand-searched for articles that may have been missed by the computer search. Additional experts were consulted for articles that may also have been missed.

Literature Review and Inclusion Criteria

The articles identified during the literature reviews formed the basis for formulating the guideline recommendations. The literature search for the guideline development was validated by: (1) comparing the results to a search conducted by the independent research and appraisal team; (2) a review of the database by the expert panel; and (3) requesting articles pertaining to special topics from the experts in the working group.

Preparation of Evidence Tables (reports)

A group of clinician reviewers and other researchers in health care, with experience in evidence-based appraisal, independently read and coded each article that met inclusion criteria. Each article was turned into a one-page summary of the critical appraisal by the research team and added to a central electronic database. Clinicians from the Center for Evidence-Based Practice at the State University of New York [SUNY], Upstate

Medical University, Department of Family Medicine contributed several of the appraisal reports. Each of the evidence reports covered:

- Summary of findings
- Methodology
- Search terms
- Resources searched
- Summary table of findings
- Critical appraisal of each study

Recommendation and Overall Quality Rating

Evidence-based practice involves integrating clinical expertise with the best available clinical evidence derived from systematic research. The Working Group reviewed the evidence and graded it using the rating scheme developed by the United States Preventive Service Task Force (USPSTF) (2001). The experts themselves, after an orientation and tutorial on the evidence grading process, formulated Quality of Evidence ratings (see Table 1), a rating of Overall Quality (see Table 2), a rating of the Net Effect of the Intervention (see Table 3), and an overall Recommendation (see Table 4).

Evidence Grading System

TABLE 1: Quality of Evidence (QE)

I	At least one properly done RCT
II-1	Well designed controlled trial without randomization
II-2	Well designed cohort or case-control analytic study
II-3	Multiple time series, dramatic results of uncontrolled experiment
III	Opinion of respected authorities, case reports, and expert committees

TABLE 2: Overall Quality

Good	High grade evidence (I or II-1) directly linked to health outcome
Fair	High grade evidence (I or II-1) linked to intermediate outcome; *or* Moderate grade evidence (II-2 or II-3) directly linked to health outcome
Poor	Level III evidence or no linkage of evidence to health outcome

TABLE 3: Net Effect of the Intervention

Substantial	More than a small relative impact on a frequent condition with a substantial burden of suffering; *or* A large impact on an infrequent condition with a significant impact on the individual patient level.
Moderate	A small relative impact on a frequent condition with a substantial burden of suffering; *or* A moderate impact on an infrequent condition with a significant impact on the individual patient level.
Small	A negligible relative impact on a frequent condition with a substantial burden of suffering; *or* A small impact on an infrequent condition with a significant impact on the individual patient level.
Zero or Negative	Negative impact on patients; *or* No relative impact on either a frequent condition with a substantial burden of suffering; *or* An infrequent condition with a significant impact on the individual patient level.

TABLE 4: Final Grade of Recommendation

	The net benefit of the intervention			
Quality of Evidence	Substantial	Moderate	Small	Zero or Negative
Good	*A*	*B*	*C*	*D*
Fair	*B*	*B*	*C*	*D*
Poor	*I*	*I*	*I*	*I*

A A strong recommendation that the intervention is always indicated and acceptable
B A recommendation that the intervention may be useful/effective
C A recommendation that the intervention may be considered
D A recommendation that a procedure may be considered not useful/effective, or may be harmful.
I Insufficient evidence to recommend for or against – the clinician will use clinical judgment

Abstract of the USPSTF:

- Once assembled, admissible evidence is reviewed at three strata: (1) the individual study, (2) the body of evidence concerning a single linkage in the analytic framework, and (3) the body of evidence concerning the entire preventive service. For each stratum, the Task Force uses explicit criteria as general guidelines to assign one of three grades of evidence: good, fair, or poor.

- Good or fair quality evidence for the entire preventive service must include studies of sufficient design and quality to provide an unbroken chain of evidence-supported linkages that generalize to the general primary care population and connect the preventive service with health outcomes. Poor evidence contains a formidable break in the evidence chain, such that the connection between the preventive service and health outcomes is uncertain.

- For services supported by overall good or fair evidence, the Task Force uses outcomes tables to help categorize the magnitude of benefits, harms, and net benefit from implementation of the preventive service into one of four categories: substantial, moderate, small, or zero/negative.

The Task Force uses its assessment of the evidence and magnitude of net benefit to make a recommendation, coded as a letter: from A (strongly recommended) to D (recommend against). It gives an "I" recommendation in situations in which the evidence is insufficient to determine net benefit (Harris et al., 2001).

Lack of Evidence – Consensus of Experts

The majority of the literature supporting the science for these guidelines is referenced throughout the document and is based upon key RCTs and longitudinal studies published from 1998 through July 2002. Following the independent review of the evidence, a consensus meeting was held to discuss discrepancies in ratings and formulate recommendations. Where existing literature was ambiguous or conflicting, or where scientific data was lacking on an issue, recommendations were based on the clinical experience of the Working Group. These recommendations are indicated in the evidence tables as based on "Working Group Consensus".

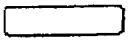
Algorithm Format

The goal in developing the guideline for managing traumatic stress symptoms was to incorporate the information from several existing reports, recommendations, and statements into a format which would maximally facilitate clinical decision making. The use of the algorithm format was chosen because of the evidence that such a format improves data collection, diagnostic and therapeutic decision-making and changes patterns of resource use. The algorithm format may help the clinician sort out the logic and sequence of the decision-making process for choosing the appropriate interventions to help survivors during the disorientation that often follows a trauma.

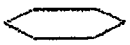
The algorithmic format allows the provider to follow a linear approach to critical information needed at the major decision points in the clinical process, and includes:

- An ordered sequence of steps of care
- Recommended observations
- Decisions to be considered
- Actions to be taken.

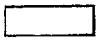
A clinical algorithm diagrams a guideline into a step-by-step decision tree. Standardized symbols are used to display each step in the algorithm (SMDMC, 1992). Arrows connect the numbered boxes indicating the order in which the steps should be followed.



Rounded rectangles represent a clinical state or condition.



Hexagons represent a decision point in the guideline, formulated as a question that can be answered Yes or No. A horizontal arrow points to the next step if the answer is YES. A vertical arrow continues to the next step for a negative answer.



Rectangles represent an action in the process of care.

Ovals represent a link to another section within the guideline.

A letter within a box of an algorithm refers the reader to the corresponding annotation. The annotations elaborate on the recommendations and statements that are found within each box of the algorithm. Included in the annotations are brief discussions that provide the underlying rationale and specific evidence tables. Annotations indicate whether each recommendation is based on scientific data or expert opinion. A complete bibliography is included in the guideline.

APPENDIX B
Acronym List

ABCs	Airway, breathing, circulation
AHCPR	Agency for Healthcare Policy and Research
APA	American Psychiatric Association
ASD	Acute stress disorder
ASR	Acute stress reaction
AUDIT	Alcohol Use Disorders Identification Test
CAGE	Alcohol abuse/dependence screening test mnemonic
CAPS	Clinician Administered PTSD Scale
CBC	Complete blood count
CBT	Cognitive Behavioral Therapy
CCTR	Cochrane Central Register of Controlled Trials
CDR	Commander
CNS	Central nervous system
COSR	Combat and operational stress reactions
CISD	Critical Incident Stress Debriefing
CT (Interventions)	Cognitive Therapy
CT	Computed tomography
CV	Cardiovascular
DARE	Database of Abstracts of Reviews of Effectiveness
DAST	Drug Abuse/Dependence Screener
DBT	Dialectical Behavioral Therapy
DoD	Department of Defense
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders (4th edition)
DTE	Direct Therapeutic Exposure
EBM	Evidence-based medicine
EBPTU	Evaluation and Brief PTSD Treatment Unit
EEG	Electroencephalography
EKG	Electrocardiogram
EMDR	Eye Movement Desensitization and Reprocessing
EMTs	Emergency Medical Teams
ESRT	Emotional Self-Regulation Therapy
EtoH	Ethanol
ET	Exposure Therapy
FDA	U. S. Food and Drug Administration
GAF	Global Assessment of Function
GI	Gastrointestinal
GU	Genitourinary
HCG	Human Choriogonadotropin
HIV	Human immunodeficiency virus
IRT	Image Rehearsal Therapy
LOC	Level of consciousness
LOF	Level of function
MAOIs	Monoamine oxidase inhibitors
MAST	Michigan Alcohol Screening Test
MDD	Major Depressive Disorder
MHP	Mental health providers
MI	Myocardial infarction
MMSE	Mini-Mental State Examination
MRI	Magnetic resonance imaging
MSE	Mental status examination
NIMH	National Institute of Mental Health
NS	Nervous system
OMO	Ongoing military operations

OTC	Over-the-counter
PCL-C	PTSD Checklist – Civilian Version
PCL-M	PTSD Checklist – Military Version
PCL-S	PTSD Checklist – Stressor Specific Version
PCP	Primary care provider
PE	Physical examination
PE (Interventions)	Prolonged Exposure
PIES	Proximity, Immediacy, Expectancy, Simplicity
PTSD	Post-traumatic Stress Disorder
QE	Quality of evidence
RCS	Readjustment Counseling Services
RCT	Randomized controlled trial
RTD	Return-to-duty
SC	Supportive Counseling
SIADH	Syndrome of inappropriate antidiuretic hormone
SIPU	Specialized Inpatient PTSD Unit
SIT	Stress Inoculation Therapy
SM	Service member
SR	Strength of recommendation
SSRI	Selective Serotonin Reuptake Inhibitors
SUD	Substance Use Disorder
SUNY	State University of New York
TCAs	Tricyclic Antidepressants
TSH	Thyroid Stimulating Hormone
USPSTF	U.S. Preventive Service Task Force
VA	Veterans Affairs
VAMC	Veterans Affairs Medical Center
VHA	Veterans Health Administration

APPENDIX C
PTSD Screening Tools

Primary Care PTSD Screen (PC-PTSD)

The table below shows the Primary Care PTSD Screen (PC-PTSD) that has been designed for use in primary care and other medical settings. The PC-PTSD is brief and problem-focused. The screen does *not* include a list of potentially traumatic events. There are two reasons for this:

- Studies on trauma and health in both male and female patients suggest that the active mechanism linking trauma and physical health is the diagnosis of PTSD. In other words, the relationship between trauma and health appears to be mediated through a current PTSD diagnosis.
- A symptom-driven screen, rather than a trauma-focused screen, is attractive to primary care staff who may not be able to address a patient's entire trauma history during their visit with the patient. Such a trauma inquiry might be especially problematic with a VA population where the average number of traumatic events meeting criterion A for PTSD is over four.

A positive response to the screen does not necessarily indicate that a patient has Post-traumatic Stress Disorder. However, a positive response does indicate that a patient *may* have PTSD or trauma-related problems and further investigation of trauma symptoms by a mental-health professional may be warranted.

Primary Care PTSD Screen In your life, have you ever had any experience that was so frightening, horrible, or upsetting that, *in the past month*, you...
1. Have had nightmares about it or thought about it when you did not want to? YES NO
2. Tried hard not to think about it or went out of your way to avoid situations that reminded you of it? YES NO
3. Were constantly on guard, watchful, or easily startled? YES NO
4. Felt numb or detached from others, activities, or your surroundings? YES NO
Current research suggests that the results of the PC-PTSD should be considered "positive" if a patient answers "yes" to any two items.

PTSD CheckList – Civilian Version (PCL-C)

Patient's Name: _____

Instruction to patient: Below is a list of problems and complaints that veterans sometimes have in response to stressful life experiences. Please read each one carefully, put an "X" in the box to indicate how much you have been bothered by that problem *in the last month.*

No.	Response:	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
1.	Repeated, disturbing *memories, thoughts,* or *images* of a stressful experience from the past?					
2.	Repeated, disturbing *dreams* of a stressful experience from the past?					
3.	Suddenly *acting* or *feeling* as if a stressful experience *were happening again* (as if you were reliving it)?					
4.	Feeling *very upset* when *something reminded* you of a stressful experience from the past?					
5.	Having *physical reactions* (e.g., heart pounding, trouble breathing, or sweating) when *something reminded* you of a stressful experience from the past?					
6.	Avoid *thinking about* or *talking about* a stressful experience from the past or avoid *having feelings* related to it?					
7.	Avoid *activities* or *situations* because *they remind you* of a stressful experience from the past?					
8.	Trouble *remembering important parts* of a stressful experience from the past?					
9.	Loss of *interest in things that you used to enjoy*?					
10.	Feeling *distant* or *cut off* from other people?					
11.	Feeling *emotionally numb* or being unable to have loving feelings for those close to you?					
12.	Feeling as if your *future* will somehow be *cut short*?					
13.	Trouble *falling* or *staying asleep*?					
14.	Feeling *irritable* or having *angry outbursts*?					
15.	Having *difficulty concentrating*?					
16.	Being *"super alert"* or watchful on guard?					
17.	Feeling *jumpy* or easily startled?					

Weathers, F.W., Huska, J.A., Keane, T.M. *PCL-C for DSM-IV.* Boston: National Center for PTSD – Behavioral Science Division, 1991.

This is a Government document in the public domain.

PTSD CheckList – Military Version (PCL-M)

Patient's Name: _____

Instruction to patient: Below is a list of problems and complaints that veterans sometimes have in response to stressful military experiences. Please read each one carefully, put an "X" in the box to indicate how much you have been bothered by that problem in *the last month.*

No.	Response:	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
1.	Repeated, disturbing *memories, thoughts,* or *images* of a stressful military experience?					
2.	Repeated, disturbing *dreams* of a stressful military experience?					
3.	Suddenly *acting* or *feeling* as if a stressful military experience *were happening again* (as if you were reliving it)?					
4.	Feeling *very upset* when *something reminded* you of a stressful military experience?					
5.	Having *physical reactions* (e.g., heart pounding, trouble breathing, or sweating) when *something reminded* you of a stressful military experience?					
6.	Avoid *thinking about* or *talking about* a stressful military experience or avoid *having feelings* related to it?					
7.	Avoid *activities* or *situations* because *they remind you* of a stressful military experience?					
8.	Trouble *remembering important parts* of a stressful military experience?					
9.	Loss of *interest in things that you used to enjoy?*					
10.	Feeling *distant* or *cut off* from other people?					
11.	Feeling *emotionally numb* or being unable to have loving feelings for those close to you?					
12.	Feeling as if your *future* will somehow be *cut short*?					
13.	Trouble *falling* or *staying asleep*?					
14.	Feeling *irritable* or having *angry outbursts*?					
15.	Having *difficulty concentrating*?					
16.	Being *"super alert"* or watchful on guard?					
17.	Feeling *jumpy* or easily startled?					

Weathers, F.W., Huska, J.A., Keane, T.M. *PCL-M for DSM-IV.* Boston: National Center for PTSD – Behavioral Science Division, 1991.

PTSD CheckList – Stressor Specific Version (PCL-S)

The event you experienced was: _____ **on:** _____

Instruction to patient: Below is a list of problems and complaints that veterans sometimes have in response to stressful military experiences. Please read each one carefully, put an "X" in the box to indicate how much you have been bothered by that problem in *the last month.*

No.	Response:	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
1.	Repeated, disturbing *memories, thoughts,* or *images* of the stressful experience?					
2.	Repeated, disturbing *dreams* of the stressful experience?					
3.	Suddenly *acting* or *feeling* as if the stressful experience *were happening again* (as if you were reliving it)?					
4.	Feeling *very upset* when *something reminded* you of the stressful experience?					
5.	Having *physical reactions* (e.g., heart pounding, trouble breathing, or sweating) when *something reminded* you of the stressful experience?					
6.	Avoid *thinking about* or *talking about the* stressful experience or avoid *having feelings* related to it?					
7.	Avoid *activities* or *situations* because *they remind you* of the stressful experience?					
8.	Trouble *remembering important parts* of the stressful experience?					
9.	Loss of *interest in things that you used to enjoy*?					
10.	Feeling *distant* or *cut off* from other people?					
11.	Feeling *emotionally numb* or being unable to have loving feelings for those close to you?					
12.	Feeling as if your *future* will somehow be *cut short*?					
13.	Trouble *falling* or *staying asleep*?					
14.	Feeling *irritable* or having *angry outbursts*?					
15.	Having *difficulty concentrating*?					
16.	Being *"super alert"* or watchful on guard?					
17.	Feeling *jumpy* or easily startled?					

Weathers, F.W., Huska, J.A., Keane, T.M. *PCL-S for DSM-IV.* Boston: National Center for PTSD – Behavioral Science Division, 1991.

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APPENDIX E
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